

FirstGlimpse®

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Processor Family p. 41

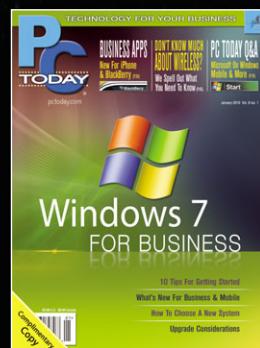
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On-The-Go Computing



Since 1979, Sandhills Publishing has produced publications covering technology beginning with the introduction of *Processor*. Over the years, the company has developed a complete line of computing publications, encompassing *Smart Computing*, *PC Today*, *Computer Power User*, and *First Glimpse*.

Our plain-English approach has served audiences well for 30 years, ensuring they receive accurate and unbiased technology information to meet their needs.



FirstGlimpse®

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68501-5380



Hours

Mon. - Fri.: 7 a.m. to 8 p.m. (CST)
Sat.: 8 a.m. to 4 p.m. (CST)
Online Customer Service &
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The Connected Home

Discover New Possibilities With Today's Technology

TODAY A WIDE VARIETY of digital devices and technologies work together to make all kinds of information available whenever and wherever you need it. Stream movies to your home theater; download photos from a relative overseas to a photo frame in your living room; or upload music from your MP3 player to your car. Whatever you want to do, there's a product out there to help you do it. Use this digital home blueprint to identify the types of things you want to do, and then go to the appropriate pages to learn about related products and technologies.

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COMPILED BY ANDREW LEIBMAN

▶ Worldwide Wi-Fi

According to the Wi-Fi hotspot locator WeFi, folks traveling to Thailand, Israel, Brazil, Argentina, and the Bahamas should have no trouble finding free access to Wi-Fi, as there are a higher percentage of open hotspots than in both the United States and Europe. Of the WeFi-cataloged hotspots in the United States, 40% are unlocked to allow anyone to log on for free. That's above the worldwide average of 30% unlocked. Europe, on the other hand, is below average regarding Wi-Fi access, with some 25% of hotspots left unlocked for Web-seeking mobile gadget users. Despite Europe's miserly attitude toward Wi-Fi, Belgium and Norway both offer better than 30% of their hotspots for free. If you find yourself in Germany or Spain, however, you'd best leave your netbook in the hotel; less than 20% of the hotspots are open there.



▶ Tech-Injected Cars

TVs, PCs, and portable displays are common ways to consume media these days, but the Consumer Electronics Association thinks a screen in your car will be the next multimedia frontier. The firm announced that sales of in-vehicle technology including portable GPS; in-car video; wireless technology; and other integrated entertainment, navigation, and security products were expected to exceed \$9.3 billion in 2009. But the CEA isn't the only firm to notice the tech in our vehicles. Edmunds.com also announced its list of the top 10 automotive technologies of the past decade, which includes iPod integration, MP3 file access, Bluetooth, satellite radio, high-end branded audio systems, exterior cameras, navigation, voice activation, Ford Sync, and location-based services.

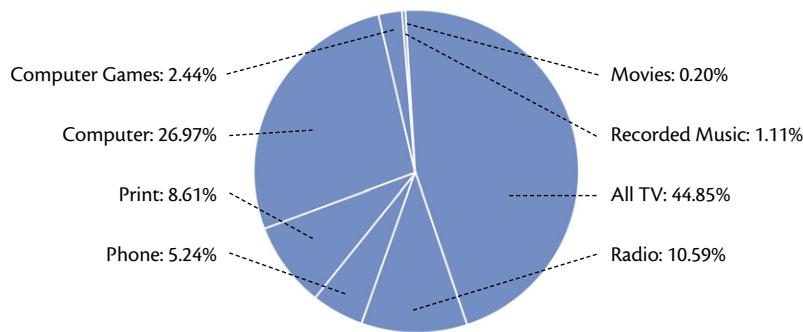


marketplace

Our Media Appetite

The University of California San Diego released a study called "How Much Information," which found that in 2008, the average American saw and heard 34GB of content and 100,000 words of information each day through media sources such as TV (including DVDs, recorded TV, and live TV), the Internet, radio, text messages, video games, print sources, and recorded music. The study found that American households were collectively exposed to 3.6ZB (zettabytes) of information, which is roughly equivalent to 3.6 billion trillion bytes (3.6 followed by 20 zeros). To break down that colossal number, the study collected statistics from a wide range of government and industry sources to determine how much of the average person's daily media intake is focused on each media type, with TV, radio, and computers topping the list.

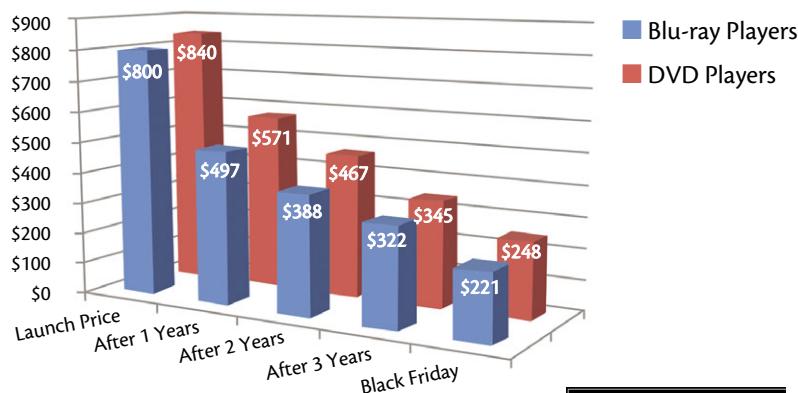
Media We Spend Our Information Hours On



Blu-ray Disc Cheaper Than DVD All Along

Blu-ray Disc players flew off the shelves this past holiday season, but if you didn't get one, you'll have a hard time arguing that price was the reason for your reluctance. The market-research company Envisioneering Group compared the initial median prices of Blu-ray players (in 2006) and DVD players (in 1997) as well as the median prices after one year, two years, three years, and on Black Friday of the third year. Both technologies experienced the price declines typical of consumer electronics, but Blu-ray players were cheaper than DVD players at similar stages of adoption by an average of \$49 each year.

BD Player Costs vs. DVD Player Costs



tidbits

According to The NPD Group, Blu-ray Disc player sales jumped 53% during the week of Black Friday. Market research firm IDC also reported that 9 million Blu-ray players were expected to be shipped in 2009, which is a significant 54% boost compared to the same period in 2008.

Source: IDC, The NPD Group

InformationWeek reported that more users are making online purchases with their cell phones. For instance, eBay claims that mobile shoppers purchased 1.5 million items using their devices toward the end of 2009. One user even used a mobile phone to purchase a 1966 Corvette for \$75,000.

Source: InformationWeek

Of those who were buying an HDTV during the 2009 holiday season, approximately 46% said it would be their first. Half of the survey respondents said they have no preference between brick-and-mortar retail vs. online stores; they just wanted the best deal. And 42% said that positive reviews, word of mouth recommendations, and brand recognition were more important than seeing the TV for themselves.

Source: Retrevo

According to the research firm iSuppli, eReaders shipped to the tune of 5 million in 2009 and are expected to surpass 12 million units for this year. That means Taipei-based Prime View International is sitting pretty, as it currently supplies e-Ink screens to the top eReaders, including Amazon's Kindle, Barnes & Noble's Nook, and Sony's Reader.

Source: iSuppli

HOW TO BUY A Media Extender

Stream Media From A PC To Your Home Theater



our daughter's wedding was fantastic, but now it's the day after and you want to relive the day in photos and videos with your extended family in the comfort of your home. Sure, you could pack everyone in the home office around the PC you stored the media on. Conversely, everyone could spread out more comfortably in your home theater and view the same visuals on your more graphically and audibly pleasing home-theater system. A media extender can help accomplish as much. Here are some tidbits to know when shopping for one.

Let The Media Flow

In short, media extenders are devices that hunt down photos, videos, and audio on a PC to stream them for playing in a home theater. Beyond breaking media free of the constraints of PC storage, media extenders also eliminate the hassle, cost, and time associated with burning media to DVDs or transferring files to portable storage devices for playback via the home theater. Also beneficial is that media extenders aren't difficult to set up and configure, and they rely on a familiar user interface and remote control approach for navigating and controlling media. Connecting a media extender to a home theater is as easy as connecting an HDMI or Composite cable to a device. Accessing PC-stored files, meanwhile, requires connecting the media extender to your wired or wireless home network.

Wired To Stream

Compared to photos and audio, streaming video requires more heavy lifting. If you plan to stream HD-quality video from a PC to your home theater, consider using a wired network connection if your home-theater layout allows. If not, know that although a wireless 802.11g Wi-Fi network should support streaming SD (standard-definition) media, it will likely buckle when attempting HD-quality video streams and result in video that stutters, freezes, or drops out entirely. Bumping up to a wireless 802.11n Wi-Fi network will do the trick.

Extend The Extender's Reach

Some media extenders can stream more than photos, video, and audio from your personal media library. Say, for example, you want to witness your grandson's first fishing trip via photos your son posted to an online photo- or video-sharing site. Some media extenders can deliver such

online-based content, as well as stream music from online radio stations, including custom stations you've created, over your home-theater speakers—possibly a better audio-quality option than listening over your PC's speakers.

Get In The Game

If streaming media sounds promising but you're also considering adding a gaming element to your home theater, some gaming consoles cover both fronts. Each of Microsoft's Xbox 360 models, for example, can stream media, Internet TV programs, and other content from PCs running a compatible Windows OS (operating system) that supports Windows Media Center, including Windows XP Media Center Edition or varieties of Windows Vista and Windows 7. Besides game consoles, media extenders also come in devices resembling cable set-top boxes and hard drives and USB sticks that plug into an HDTV. **FG**

BY BLAINE FLAMIG

The Media Extender Rundown

When considering media extenders, remember:

- A wireless or wired home network is required
- Some gaming consoles can function as a media extender
- Some media extenders can stream personal files and online content
- Use a wired or wireless 802.11n Wi-Fi network if streaming HD video

Make The Move To BD

Enhance Your Home-Theater Experience



hen the weekend rolls around, it's time to hit the movies, and tonight's showing has some big surprises. How about

free tickets, unlimited popcorn, and a soft recliner? With a BD (Blu-ray Disc) player and movies, you and your family can enjoy the perks of the movie theater from the comfort of your home.

Blu-ray Benefits

Blu-ray offers the best audio and video quality available, transforming your family movie night into a truly cinematic home-theater experience. Although BD movies cost more than traditional DVDs, they boast up to six times the amount of video detail in high definition, rendering the film's rolling ocean waves so realistically that you'll

believe you're standing at the shore's edge. In addition to HD video, BD movies also feature higher-quality audio formats, often in the form of lossless or uncompressed audio, which means you'll fully hear every sweet nothing the prince whispers to the princess.

BDs can also hold more data than DVDs, which means there's more room on each disc for special features. Get a behind-the-scenes look at your favorite movie and learn about how it was made, play interactive games with the movie's characters, or sneak a peek at never-before-seen deleted scenes.

Just when you think the show's over, there's even more you can do with Blu-ray. With a BD-Live-compatible player and an Internet connection, BD-Live movies let you download additional content and bonus features online and update or upgrade your player.

In addition to better picture and sound, BD movies are more durable than DVDs and won't scratch as easily, so you can rest easily when the kids are setting up their own cinematic adventures while you take care of dinner. And there's no need to worry about not being able to view your existing DVD collection; BD players will upscale your DVDs to a higher resolution, making them look better than ever.

Better Than The Theater

Blu-ray can change the way you and your family view a night at the movies. Enjoying a great film together doesn't mean you have to shush the chatting in the row ahead of you or wonder what sticky substance you just put your shoe in. With Blu-ray, you can truly sit back, relax, and enjoy the show. **FG**

BY KRIS GLASER



Get The Optimum Performance

You can feel immersed in every moment of a wild car chase, an action-packed sword fight, or a tranquil horseback ride through the forest. In order to get the most vivid picture from your BD player and movies, you should have an HDTV with 1080p resolution. Surround-sound speakers will engulf you in the moment and bring any scene to life. And to ensure you're getting the best picture and sound, you should budget for accessories such as HDMI cables, too. ●

Gather Around

View Your Home Media On An HDTV

Cramming your friends around a monitor is one way to show off your digital photos and videos at home, but it's not always convenient or comfortable, particularly if the PC resides in a bedroom or small home office. Conversely, plopping down on a comfy couch to view home-brewed media on a sprawling HDTV is not only more enjoyable, but it offers a typically crisper, brighter viewing experience. The following are several handy inputs HDTVs provide to bask in wedding, holiday, and other events documented in your photos and videos.

The Ties That Bind

Own an HD camcorder? It probably has an HDMI output that will connect to an HDTV's HDMI input via an HDMI cable. This connection displays home media at the best possible quality, as HDMI cables don't compress the digital video and audio they transfer. This method also works with newer digital cameras that have an HDMI output.

If your device doesn't have an HDMI output, Component, S-Video, and Composite connections are other possibilities for hooking it up to your HDTV, although you'll experience some drop-off in image and audio quality from HDMI.

HDTVs with dedicated media USB ports, meanwhile, allow for attaching a USB thumb drive or external hard drive containing your audio, photos, and videos. Some of Samsung's HDTVs



(www.samsung.com), in fact, include a multimedia USB 2.0-based feature that supplies an interface to access and navigate media on connected USB devices via remote control.

Connections For Viewing Media On HDTVs

- **HDMI:** offers the best audio and video quality but requires that devices have HDMI output
- **USB:** ultra-convenient and found on many devices
- **Memory card slot:** small form factor means quick and tidy transfers
- **HD media player dock:** versatile and user friendly
- **PC:** flexible but less convenient
- **DLNA:** home network-based method with a promising future

Another USB-based option is an HD media player dock. This attaches to an HDTV via an HDMI or a Component input and provides an interface to access and navigate the photos, audio, videos, and movies a docked USB device contains with a remote control for viewing in up-to-HD quality complete with slideshow, audio, and other functions.

Other Options

An increasingly more common option that some HDTVs are including is a built-in memory card slot to view media. Just remove, say, an SD card from a digital camera, slip it in the HDTV's slot, and you're in business.

A less common option is DLNA (Digital Living Network Alliance), a software-based feature that enables some HDTVs to tap in to a home network and stream photos and videos from a PC. Although there are still few DLNA-certified products, that's changing.

Finally, although more cumbersome, most HDTVs offer a PC input to directly connect a PC or laptop. Beyond displaying PC-stored media on the HDTV screen, this method essentially turns the HDTV into a glorified monitor screen.

Armed with the knowledge of the various methods that HDTVs include to view your home photos and videos on an HDTV screen, you can now match the outputs your digital camera or camcorder includes with the inputs that a prospective HDTV you're considering buying includes. **FG**

BY BLAINE FLAMIG

Future-Proof Your Home-Theater Purchase

Spend Wisely For The Long-Term

Everyone wants the most bang for their buck, and it's wise to apply that sentiment to the long term. When every dollar counts, it's smart to buy home-theater components that will last you a long, long time.

That means buying quality, but it also means buying technologies that won't become obsolete anytime soon. Here's a list of examples.

Video

Your HDTV should support the best high-def resolution around, at least as far as movie discs, TV programming, and camcorders are concerned. Get a 1080p set, which is backward-compatible with other high- and standard-def resolutions, including 1080i, 720p, and 480i.

Your HDTV should also have multiple HDMI 1.3 ports, which can carry top-quality video and audio. Also, go with technologies that reduce motion blur, such as a 120Hz or faster refresh rate.

A BD player is more future-proof than a DVD player, as it can play high-def Blu-ray Discs and upconvert DVDs to look their best on an HDTV. Choose a model with an Internet connection and BD-Live capability, also known as BD Profile 2.0. BD-Live movie discs let you access



updated content online, such as movie trailers and exclusive features.

Verify that your BD player can play AVCREC or AVCHD discs. These formats let you burn high-def camcorder footage to inexpensive DVDs. Consider HDMI 1.3 support, too.

You already know that a DVR is a cable or satellite subscriber's best friend. Get one that supports HD, so that you can play back recorded high-def shows at their top quality. Make sure that your DVR supports an external hard drive, so you can add more capacity for recorded programs later.

A media extender frees up all the photos and videos on your family's PCs and lets you stream them to your HDTV. For wireless networking with minimal interruptions, look for a media extender that supports the 802.11n standard.

Some Internet TV set-top boxes and BD players also stream video from a down-

load service, such as Netflix. It's a little early to tell how download services will evolve, but a streaming device will add a new dimension to your home theater.

Audio

Most BD players can decode (play back) audio stored on BD movies in formats such as Dolby Digital Plus, but not all players can handle every format in full surround sound. It's better to rely on a high-quality multichannel sound system with an HDMI 1.3 connection. Buy an audio receiver with full support for 7.1-channel DTS-HD Master Audio and Dolby Digital TruHD, as it will be backward-compatible with 5.1-channel playback and lesser formats such as DTS and Dolby Digital.

As for a wireless music system, choose one that's expandable with additional receivers, that's backward- and forward-compatible with the manufacturer's add-ons, and that comes with free updates. **FG**

BY MARTY SEMS

Yes, You Need To Calibrate

Get Optimal HDTV Video Results

The HDTV is the center of attention in any home-theater setup. To ensure that it is providing the best video results, consider a professional HDTV calibration.

Your Video May Not Be All That It Seems

While every HDTV owner is unique, the display settings on an HDTV may not be. If you want to ensure lifelike image quality for your HDTV, you'll need a professional to perform a calibration.

- Most TVs are shipped with a set standard video mode meant for an electronics store display—this means that the TV's settings are adjusted to show the best picture in a bright, fluorescent-lit environment. Because it's unlikely your lighting at home matches the store's surroundings, you should have your TV professionally calibrated by an ISF (Imaging Science Foundation)-certified specialist to

accommodate your home's unique lighting environment.

- An HDTV's viewing angle and your home-theater setup also affect how your HDTV should be calibrated. An ISF-certified professional takes these factors into account when making adjustments.
- Although you can expect to budget 10 to 15% of the purchase price of your television for a professional calibration, consider it an entertainment investment that will pay dividends for years to come.

aren't meant to be experimented with, so if you poke around and gain access to your TV's service menu, it's best to leave it alone. Many customers have rendered their TVs useless because they didn't know which settings they were changing.

- Calibration DVDs only adjust video settings for your HDTV's DVD input. This means when you're watching video from a source other than a DVD, your picture won't be calibrated. A professional calibration takes care of two source inputs, such as your DVD player and cable box inputs.

Why A Professional Calibration?

Instead of taking a chance with your HDTV investment, rely on professionals to handle the work for you.

- Calibration specialists are ISF-certified, which means they are trained to use highly specialized and expensive equipment to calibrate HDTVs correctly.
- A calibration DVD might be a tempting alternative, but it won't let you adjust all of your HDTV's settings. An ISF-certified professional can access advanced service menus to calibrate your TV correctly. These settings

What You Can Expect

An in-home calibration service will typically last about two hours and includes the following:

- A professional will use color analyzer equipment to objectively tune color saturation and temperature as precisely as possible, letting you see video exactly the same way it looked when it was created.
- Your HDTV's contrast will be set up to provide greater video detail as well as the darkest blacks and brightest whites.
- No matter which calibrated source input you are using, you will enjoy the best image clarity and sharpness that your HDTV can provide. **FG**



Essential

THINGS TO KNOW

SPEAKER SETUPS

Q **What can speaker systems add to my home theater?**

A These will give you a better illusion of being in the middle of the action than TV speakers would because you can place individual speakers around the room.

Q **What types of home-theater speaker setups are available?**

A Surround sound is the most popular and immersive setup. Stereo sets and soundbars are other options.

Q **What are typical surround-sound configurations?**

A A 5.1-channel set involves five satellite speakers to surround the viewer, plus a subwoofer for deep bass. A 7.1-channel system's extra speakers make rear and side sounds more spatially precise.

Q **How can I buy a surround-sound system?**

A You can buy an HTB (home theater in a box), or you can buy individual components and cables separately.

Q **What's an HTB?**

A It's a kit that comes with satellite speakers, a subwoofer, and an audio receiver. It might also include speaker cables, a BD (Blu-ray Disc) or DVD player, a remote, and possibly other extras.

Q **Does an HTB come with everything I need to set up home-theater audio?**

A Not quite. You might need to buy wall mounts, speaker stands, and/or cables to connect the receiver to your TV and disc player.

Q **Why would I consider buying surround-sound components separately?**

A You can mix and match components from different manufacturers. For example, you might prefer the tone of a particular brand of speakers and the features of another vendor's receiver.

Q **What does a receiver do?**

A It amplifies the sound signal and sends it to the speakers and subwoofer. Current receivers can also decode some or all of the audio formats found in DVDs and BDs.

Q **What is decoding?**

A Most DVD and BD audio is encoded (stored) in various Dolby and/or DTS digital formats. These formats must be decoded (turned into audible sound) for you to hear them.

Q **What does a stereo configuration involve?**

A A stereo system has only two speakers (left and right), so it's compact and easy to set up. When it comes with a subwoofer, it's called a 2.1-channel system.

Q **What is a soundbar?**

A This is a horizontal block of angled speakers. It can simulate surround sound with audio processing and/or by bouncing sound waves off the walls of the room. These are best for rooms with a non-standard shape, or if it would be difficult to route cables to surround speakers, as they can give you most of the benefits of real surround sound.



HDTV Glossary

B

alderdash! OK, HDTV jargon isn't *that* bad, but there are a few terms every shopper should know. Here's your cheat sheet.

aspect ratio—Put simply, it's the shape of the TV's screen. An HDTV has a wider picture than a traditional TV of the same vertical screen height. An HDTV has a 16:9 aspect ratio, meaning that if its screen were 16 inches wide, it would be 9 inches tall. A regular 4:3 TV screen would be 12 inches wide at the same 9-inch height.

HDMI—High-Definition Multimedia Interface is a type of cable connection that carries both high-resolution video and uncompressed multichannel audio among HDTVs, home-theater receivers, and other components. HDMI cables maintain top picture and sound quality.

HD tuner—Some more expensive HDTVs include a built-in tuner for receiving local high-def broadcast TV channels. Your TV doesn't need an HD tuner if you have cable or satellite service. Separate HD tuners and antennas are available for HDTVs without them.

interlaced—When an HDTV displays an interlaced image, as in 1080i or 480i resolutions, it really shows you every other horizontal line of a frame of video (called a field) at a time. Sixty times a second, the TV displays the other field of the frame, meaning the lines not shown in the previous field. Interlaced video appears to flicker and causes moving objects on-screen to have blurred edges.

LCD (liquid-crystal display)—Like a notebook's screen, an LCD HDTV uses



a fluid crystal substance to form pixels of color in front of a backlight. LCDs may not be able to match plasma TVs' deep black and gray areas, but they're lighter, sometimes less fragile, and considered easier to set up. These work better in brighter rooms or if you will be playing unchanging images on the screen for an extended period of time.

plasma—Plasma TVs use a tiny tube of gas for each pixel. Electricity makes each pixel glow. Plasmas create deeper blacks and sometimes brighter colors than LCDs and have better contrast. These also offer slightly better viewing angles. However, older or less expensive models can suffer permanent screen damage from burn-in, caused by an unchanging image, such as a stock ticker, being displayed too long.

progressive scan—A TV showing a progressively scanned image, as in 1080p or 720p resolutions, displays a full frame

of video (both odd-lined and even-lined fields) all at once. Progressive-scan video looks sharper and doesn't flicker like interlaced images can.

projection—Some large-screen HDTVs offer lower-priced alternatives to LCDs or plasmas by using projection technologies. These technologies vary, but all projection TVs throw light on a screen from the front or rear. This means they are bulkier than plasmas or LCDs, but some rear-projection sets have stellar picture quality.

viewing angle—No matter where you sit in front of an HDTV with a wide viewing angle, such as 170 degrees, its picture should look reasonably good. Test this before you buy.

widescreen—A TV or monitor that's wider horizontally in relation to its vertical height. HDTVs typically have a 16:9 aspect ratio rather than an older 4:3 display.

HDTVs

Screen Technology Differences



LCD (liquid-crystal display)

LCDs can use one of two backlight technologies. CCFLs (cold cathode fluorescent lamps) are the most common, but LEDs are the latest backlight technology to hit the LCD scene. (See the "LED" section for more info on LED TVs.)

Pros

- The thin profiles and light weight of LCDs make them easy to mount on a wall.
- Power demands are a bit lower than comparably sized plasma displays and considerably lower than CRT televisions.

Cons

- Fast-moving images may suffer from a slight trailer effect, but with improved

LCD technology, the effect is barely perceptible.

- When pixels stick on or off, they show up as either a pinpoint of bright light or black, which can be distracting on-screen.
- From certain viewing angles, LCDs will lose video contrast and color.
- LCDs with CCFL backlighting suffer from leaking light, and unlike LEDs, they can't dim certain areas on-screen. This may result in blacks and whites that appear to be more gray in color.

Best For

- Streaming PC content
- Bright, sunny rooms

LED (light-emitting diode)

LED TVs are actually a type of LCD TV. These sets use one of two LED backlight technologies:

- Full-array lighting places LEDs behind the screen in a grid pattern, letting the TV dim certain LEDs for the best contrast ratios available.
- Edge-lit sets have LEDs placed around the frame of the TV, and light is directed toward the center of the screen. Edge-lit models cost less than full-array sets and are a lot thinner.

Pros

- By using LEDs, these sets use a lot less electricity than other HDTVs, and

they don't contain harmful mercury.

- Overall, LED TVs are one-third thinner than other LCD TVs and have longer life spans.
- Plasmas are well-known for their deep blacks and crisp whites and fast response times, but LED TVs closely match in performance.

Cons

- These sets are costly because they feature a relatively new technology.
- Blooming, or a halo effect, may encircle bright images that are on dark backgrounds.

Best For

- Eco-conscious viewers
- Fast-paced gaming

Plasma

Pros

- A plasma TV's phosphors light up evenly across the screen to create images, which are consistently bright and clear with vibrant colors.
- The contrast ratio is high, so you'll see some of the darkest blacks and brightest whites.

- The design and technology of plasma TVs lend themselves to large screen sizes—typically 50 inches or greater.
- Rapid pixel response means no blurry motion.
- Wide viewing angles give you the same high-quality images on-screen no matter where in the room you happen to be sitting.

Cons

- Some plasmas are susceptible to image burn-in if not cared for properly.
- Low air pressure and high altitudes may cause plasmas to buzz.
- Some plasmas have highly reflective glass, which isn't ideal in sunny settings.

Best For

- Large groups who watch TV together
- Movies or sports with nonstop action

RPTV (rear-projection TV)

Pros

- RPTVs are surprisingly lightweight for their sizes.
- You'll find exceptional picture quality on very big screens (65 inches and larger).

- As screens get bigger, RPTVs tend to be more cost-effective than an LCD, LED, or plasma TV.

Cons

- With depths of 16 to 24 inches, these TVs are far too big and bulky to mount on a wall.

- RPTVs require lamp replacements every few years.

Best For

- Anyone who wants to bring a cinematic experience home
- Big, roomy home theaters

Which LCD TV Is Best For You?

So you've decided to get an LCD TV. The next step is deciding *which* LCD TV to invest in. With all the models on today's market, you want to be sure the model you select is the best for you and your family. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; how much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Panasonic VIERA TC-L37X1 MSRP: \$799.95* SKU 9235124	37 inches	22.8x36.1x 3.9 inches; 36 pounds (with stand)	720p	178 degrees	3 HDMI; 1 DVI; 1 S-Video; 1 Component; 2 Composite; 1 PC; 1 RF	1 audio	60Hz
	LG 42LH50 MSRP: \$1,699* SKU 9321637	42 inches	25.9x41.4x 3.6 inches; 37.9 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 RF; 1 USB; 1 LAN	1 audio	120Hz
	Samsung LN46B640 MSRP: \$1,899* SKU 9293506	46 inches	30.4x46.1x 3.1 inches; 44.8 pounds	1080p	N/A	4 HDMI; 2 Component; 2 Composite; 2 USB; 1 PC	N/A	120Hz
	Sharp Aquos LC-52LE700UN MSRP: \$2,499.99* SKU 9514153	52 inches	30.1x48.7x 3.7 inches; 50.7 pounds	1080p	176 degrees	4 HDMI; 1 S-Video; 2 HD Component; 2 Composite; 1 RS-232C; 1 PC	4 audio	120Hz
	Sony Bravia KDL-55V5100 MSRP: \$2,599.99* SKU 9476373	55 inches	33.8x52.6x 4.6 inches; 75.2 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 S-Video; 1 USB; 1 RF; 1 PC	1 audio	120Hz
	Mitsubishi LT-46249 MSRP: \$2,799* SKU 9427211	46 inches	28x42x3 inches; 68.6 pounds	1080p	N/A	4 HDMI; 3 Composite; 3 Component; 1 RF	2 audio	120Hz
	Sony Bravia KDL-46XBR8 MSRP: \$3,699.99* SKU 8996508	46 inches	27x49.6x5.7 inches; 71.6 pounds	1080p	178 degrees	4 HDMI; 1 S-Video; 2 Component; 1 PC; 1 USB; 1 SD	1 audio	120Hz
	Sharp Aquos LC65E77UM MSRP: \$3,999.99* SKU 9554779	65 inches	37.6x60.75x 4.7 inches; 99.2 pounds	1080p	176 degrees	4 HDMI; 1 S-Video; 2 HD Component; 1 Composite; 1 PC	4 audio	120Hz

*Prices listed in this issue are for general reference and may vary from retailer pricing.

**Unless specified, this is without stand.

** Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.

Which Plasma TV Is Best For You?

If you're planning on buying a plasma HDTV, it might be hard to decide on one just by looking at a wall of gorgeous sets. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Insignia NS-P42Q10A MSRP: \$599.99* SKU 9299822	42 inches	26x41.5x3 inches; 54.2 pounds	720p	160 degrees	2 HDMI; 1 Composite; 2 Component; 1 RF	2 audio	600Hz
	Insignia NS-P501Q-10A MSRP: \$697.99* SKU 9299895	42 inches	29.6x48.1x3 inches; 70.4 pounds	720p	N/A	2 HDMI; 2 Component; 1 Composite; 1 RF	2 audio	600Hz
	Samsung PN42B450 MSRP: \$799.99* SKU 9235259	42 inches	26x41.6x2.9 inches; 61.3 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Panasonic VIERA TC-P42S1 MSRP: \$999.95* SKU 9317287	42 inches	26.1x40.6x 4.2 inches; 57.4 pounds	1080p	N/A	3 HDMI; 2 Composite; 1 S-Video	1 audio	600Hz
	Panasonic VIERA TC-P50X1 MSRP: \$1,099.95* SKU 9219062	50 inches	32.125x48x 4.13 inches; 75 pounds	720p	N/A	3 HDMI; 1 S-Video; 2 Component; 2 Composite	1 audio	600Hz
	Samsung PN50B450 MSRP: \$1,199.99* SKU 9239371	50 inches	29.5x48.1x 2.9 inches; 77.2 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	Samsung PN58B850 MSRP: \$3,099.99* SKU 9293622	58 inches	36.2x56x 13.3 inches; 81.3 pounds	1080p	N/A	4 HDMI; 2 Component; 1 Composite; 1 PC	N/A	600Hz
	Pioneer KURO PDP-6020FD MSRP: \$3,999* SKU 8867871	60 inches	34.5x57x3 inches; 112 pounds	1080p	N/A	4 HDMI; 1 Component; 3 Composite; 1 S-Video	2 audio	N/A

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**Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.

NOTEWORTHY

Accessories & Services



WALL MOUNTS & BRACKETS

- View your HDTV from the best possible angle
- Adjust your TV's position by tilting it up or down as needed
- Maximize space in your viewing room by hanging up your TV



CLEANING KIT

- Protect your HDTV's screen by using specially formulated sprays and cloths while cleaning it
- Eliminate the danger of scratching delicate screens
- No-drip formulas prevent damaging other home-theater equipment



CORD-CONCEALMENT KIT

- Hide multiple cords while keeping them organized
- Minimize cord clutter, especially with wall-mounted sets
- Keep the focus on your new HDTV, not the cords connected to it



TV STANDS

- Offer flexibility if you're unable to mount your HDTV on the wall
- Available in a variety of finishes to match any décor
- Provide a place for additional home-theater equipment



HDMI CABLES

- Carry uncompressed digital audio and video signals to and from your HDTV and its components
- Eliminate interference from other components with shielding found in higher-end models



UNIVERSAL REMOTE CONTROL

- Simplify your home-theater setup with one remote that can control all of your components
- Program different functions so that you will be able to, for example, watch a movie by pressing just one button
- Easily view options in the dark with a backlit LCD



SURROUND-SOUND SYSTEM

- Maximize your HDTV experience with theater-like audio
- Feel like you're in the movie scene instead of just watching it
- Even out softer and louder programming with an equalizer



SURGE PROTECTORS/POWER CONDITIONERS

- Protect your home theater from potential damage by using a surge protector that will absorb electrical fluctuations
- Filter out "dirty power" (also known as electrical "noise" or radio interference) that can degrade your home theater's audio and video with a power conditioner
- Have peace of mind knowing that your home theater will give you its peak performance for the longest amount of time



HOME-THEATER SERVICES

A home theater is a pretty big investment, so it's wise to consider letting a professional handle your installation and setup. Let your local CE retailer tackle the following tasks, and you'll be able to enjoy the full glory of HD in no time.

- Home Theater In-Home Consultation
- TV Recycling
- TV Calibration
- TV Mounting & Cord Concealment
- Remote Control Programming
- Speaker Setup

HOW TO BUY A Tripod

Take Your Photos & Video To The Next Level

Tripods are convenient for taking self-portraits when no one else is around, but they can also prevent blurry photos or jerky videos. Here, we'll take a look at how a tripod can improve your photography and what features they have to offer.

Why Use A Tripod?

A tripod is useful for camcorders because it provides a steady base when you aren't able to hold the camcorder still for long periods of time in your hand. A tripod will also let you fluidly pan (move from side to side) or tilt (move up and down) to follow the action of your video subjects, such as your son battling a snowy hill with his snowboard.

Photographers will find that they can use a tripod to their advantage when they're snapping photos in low-light conditions and are unable to use a camera flash, such as during a dance recital or play. When you take photos in a dark setting, your camera uses a long shutter speed to gather the light needed for a good shot. If you opt to hold your camera instead of using a stable tripod, the slightest movement will cause your image results to be grainy or dark.

Full-Sized Fun

Standard tripods generally can expand to be between 53 and 72 inches tall, let-



ting you adjust the height to best suit your shooting scenario. For example, you might want your tripod to stand at its full height to capture a family portrait but get down to knee level to snap an up-close shot of your little one. These tripods also have adjustable legs that allow you to be level with the horizon, despite being on an uneven surface, as well as a handle to easily pan and tilt your camera or camcorder.

Pint-Sized Possibilities

For those who constantly travel with their camera or camcorder, a mini tripod can serve as a stable way to shoot photos or video using a table or countertop. Because mini tripods are extremely lightweight and compact, they'll take up very little room in your luggage, and you'll find that some models offer

the same features as their big brethren, such as bubble levels, extendable legs, and the ability to tilt and pan.

If you're looking for added versatility, some mini tripods have flexible legs that can wrap around tree branches or playground equipment to help you get the perfect shot of you and your child playing in the park.

Get The Professional Look

Pairing your camera or camcorder with a tripod can help elevate your images and video to professional-looking quality. And with the variety of sizes and features, every shutter bug and videographer is sure to find a tripod that best suits their needs. **FG**

BY TESSA WARNER BRENEMAN

Tripod Tips

- Tripods are best for taking self-portraits, photos in low-light situations, and capturing fluid-moving video.
- Standard tripods generally stand between 53 and 72 inches tall and are ideal for shooting group portraits or wedding videos.
- Mini tripods, which typically aren't bigger than 18 inches tall, are great for travelers.

Back Up, Edit & Share Memories

Do More With Your Digital Photos & Videos

Digital photographs and videos can document some of the best times in our lives. And once the photo is taken or the camcorder stops rolling, it's important to keep those memories safe so that you can continue to share them with friends and family for years to come. There are lots of ways to back up, edit, and share your digital files with others, letting you make the most of your digital collections.

Back It Up

You can temporarily store your images and videos on the memory card you insert into your digital imaging device. However, because memory cards have a small amount of storage space, you should only use them as a temporary storage solution and move your images to a backup service or device for preservation.

When it's time to back up your digital content, you can do so by using either a backup device or online storage service. You can offload your digital photos and videos from a camera's memory card to a flash drive or external hard drive, which offer more storage space. Although you may choose to preserve your photos on a backup device, they are still at risk of being physically damaged should the drive get lost, fail, or become corrupted.

However, if you choose to use an online backup service, your photo and video files won't face device-related risks. Many Web services are designed specifically for storing digital content. For example, Geek Squad (www.geeksquad.com) offers an online data backup service that will perform automatic backups for your data, so you never have to initiate them. And because your data will be on the Web, you'll be able to access it from any computer with an Internet connection. The service is free for one month and \$49 per year for 25GB of data.

Picture Perfect

Video- and photo-editing software has become more sophisticated for the home user over the past couple of years. This software lets you edit flaws in your

Put It All Together

To help you get more out of your photos and videos, there are desktop computers specially designed to manage multimedia, such as music, photos, and videos. These machines generally have high-end graphics cards, lots of hard drive space, monitors with advanced imaging technology, integrated memory card readers, and plenty of video inputs and outputs to help you optimize your digital collection. ●

photos, such as blemishes and poor lighting conditions, or add appropriate music to your favorite video footage. You can also get creative and add finishing touches to your photos, such as borders, or change color photos to classic black-and-whites. Generally, digital photo-editing software will also include applications that will help you create slideshows that you can burn to DVD to play at weddings and birthday parties.

Share The Joy

There's no reason to keep all those adorable photos of your kids to yourself. Several Web sites have services that make sharing photos and videos with others easy. Some let you set up your own photo-sharing Web page, while others let you email your family and friends Web links to your online photo albums. Additionally, many social networking sites will let you upload digital photo albums and videos to your personal page for sharing with your contacts.

Whether you're storing your collection for future generations to enjoy, creating special presentations, or sharing memories with others, these digital backup, editing, and sharing tools let you make the most of your digital photos and videos. FG

BY TESSA WARNER BRENEMAN



More Megapixels, Please

Have Enough To Spare

The number of megapixels a camera has is important when it comes to getting sharp, detailed images. Having more megapixels will also give you greater flexibility when it's time to crop and edit your pictures with photo-editing software.

Megapixels Matter

After you've snapped your photos, you can add finishing touches with photo-editing software to ensure your digital memories look their best. Something as simple as cropping a photo can produce a better image. For example, you might want to eliminate the top, bottom, or sides of your snapshot so you and your best friend fit squarely in the middle.

When you crop photos, however, you are also eliminating pixels. Pixels are the core ingredient of any digital image, and one megapixel is equal to 1 million pixels. Camera manufacturers use megapixel ratings, such as 10MP, to tell you how many pixels a particular model uses. This number also relates to a photo's resolution, which is measured by the total amount of pixels in an image. So, the more pixels an image has, the higher the resolution is.

When you're armed with a camera that has a high number of megapixels, your photo prints will be sharp and detailed, even if you decide to crop the original images you shot. For example,



your favorite photo of Grandma might start out as a 10MP image, which will let you produce a large, high-quality photo print. But when you are done cutting out your nephew making a face in the background, it might end up as a 6MP image—this will still produce a large, high-quality print. However, if the image started at 6MP and was cropped down to 2MP, the low number of pixels would result in a print that looks pixelated.

Be Flexible

Your photos won't always turn out just right, but with photo-editing techniques, such as cropping, they can be greatly enhanced. If you take into consideration the number of megapixels your next digital camera offers, your photo editing won't affect the quality of your image printout. A digital camera that has 7MP or more will let you crop your photos to

The Overall Picture On Megapixels

- Individual pixels produce a digital image, and 1 million pixels equal one megapixel.
- If your camera has more megapixels, your images will have a higher resolution and look sharper.
- A large amount of megapixels is preferable when you decide to crop your original images. This will let you create large, high-quality photo prints.

perfection and still have plenty of pixels left over to print large prints for your fireplace mantel. **FG**

BY TESSA WARNER BRENEMAN

Optical vs. Digital Zoom

See The Difference



The zoom lens is a wonderful tool. You can zoom out to capture a wide-angle landscape or zoom in and use the camera's telephoto capabilities to bring a distant subject even closer. When shopping for a point-and-shoot camera (as opposed to a D-SLR), you'll notice that each camera features an optical zoom and a digital zoom. Before you get too enthusiastic about having the extra telephoto capabilities of a digital zoom, it's important to understand the difference between optical and digital zoom and how they affect image quality.

For both examples, we will imagine that we're taking pictures with a 5MP camera that is set to capture images at the highest quality level.

Optical zoom uses the camera's lens (optics) to magnify the view. When using only optical zoom, the camera will capture an image file containing 5MP of information. Because only the camera's lens is used to capture the full amount



of megapixels, your image will be sharper and smoother than with digital zoom.

Digital zoom, which you can usually turn on or off in the camera's setup menu, engages when you've zoomed in as far as you can with the optical zoom. When looking at the camera's LCD or through the viewfinder, it appears that the camera is zooming in even more, but in reality, the camera has simply enlarged part of the image and cropped the rest. By cropping the image, the camera has discarded some of the image's pixels, leaving you with an image that contains far fewer pixels than one shot with an optical zoom. For example, using our previous 5MP camera, we take a picture that engages digital zoom. The camera

crops out 2MP of image data so the image file now contains only 3MP of image data. Because we're using a 5MP camera, however, the camera must produce an image with 5MP of data. In order to do this, the camera interpolates (invents) the missing pixels and adds them to the image file. The resulting image is almost always softer than the original, and individual pixels may be visible when the picture is enlarged.

So, when you're shopping for a digital camera, ignore the digital zoom specifications. And, for the best image quality and ability to make larger prints, use only the optical zoom when shooting. **FG**

BY THEANO NIKITAS

SD vs. HD

Comparing Digital Camcorders

SD

(Standard Definition)

- SD camcorders are less expensive than HD camcorders, so you can get a high-quality camera for comparatively very little money. Some SD camcorders are available for less than \$200.
- Because SD camcorders record at a lower resolution than HD camcorders, you can fit much more video on any storage medium. Effectively, that means you can shoot more footage without having to offload the video to make room.
- SD camcorders can connect to PCs via USB or FireWire. This is handy because virtually all PCs have at least one of those two ports, meaning that you can transfer video to your computer with ease.
- There are several different media formats you can choose from for SD camcorders, including MiniDV tapes, DVDs and MiniDVDs, flash, and hard drive storage.

Best For

- Aspiring videographers on a budget.
- Anyone who needs to maximize storage on the given storage medium of his or her digital camcorder.
- Those who want to take advantage of the familiar USB or FireWire interfaces to transfer video to their PCs.

HD

(High Definition)

- HD camcorders record at a high resolution, ensuring that the picture is clearer and sharper than that of an SD camcorder. Some models offer 1080p, which is the highest video resolution possible.
- Although HD camcorders are typically priced higher than SD camcorders, the prices continue to drop. Thus, HD camcorders are increasingly a great deal.
- An HD camcorder's HDMI port will let you connect it directly to your HDTV to play back your creations with a single audio/video cable.
- Thanks to HDMI, you'll experience faster video transfer speeds from your HD camcorder to your computer.
- Though some PCs have HDMI ports, many do not, so it can be slightly problematic to transfer video from the camcorder's HDMI port to a PC. You may need a different graphics card to get the HDMI connection on your PC.
- Because HD camcorders record video at a high resolution, the recorded footage takes up more space than SD footage, so you need a lot of storage capacity.
- HD camcorders are available in every video storage format, including MiniDV tapes, DVDs, flash, and hard drive-based.

Best For

- Techies who want the latest and greatest in digital camcorder technology.
- Videographers (amateur or professional) who want to capture memories at a high resolution.
- Those who want to easily and quickly transfer video to their PCs.



Essential

THINGS TO KNOW

D-SLR CAMERAS

Q What is the difference between a D-SLR and a point-and-shoot camera?

A Best for more experienced photographers, D-SLRs are generally more expensive and larger in size than point-and-shoot cameras, and they offer manual settings for a greater creative license.

Q What's the difference between a CCD and CMOS image sensor?

A CCD image sensors record an image using a grid-like field to produce a high-quality image. CMOS image sensors read each pixel individually, which means they capture more light than a CCD sensor.

Q What can I use a D-SLR's LCD screen for?

A LCD screens are designed to provide a live view of the scene you're shooting (like a viewfinder) and also let you review the pictures you've taken. Some LCD screens rotate to let you shoot from difficult angles, such as from the ground.

Q What scene modes are available on a D-SLR camera?

A Most models have automatic shot settings such as sunset, portrait, landscape, indoor, outdoor, night scene, fireworks, and sports, among others.

Q Can I shoot video with a D-SLR camera?

A Yes, some D-SLRs have a movie mode that lets you take video clips. More advanced D-SLRs will feature HD video capabilities.

Q Do I need extra lenses to use a D-SLR camera?

A That depends on your lifestyle and whether you'd want or need to match a lens to a specific shooting situation. If you do, some options are telephoto lenses (to magnify the scene), wide-angle lenses (ideal for larger scenes and landscapes), or macro lenses (for close-up portraits).

Q What types of memory cards do D-SLRs support?

A D-SLR cameras are compatible with a variety of memory card types, including CompactFlash, SD, and SDHC.

Q What are shutter priority modes?

A Shutter priority modes are full manual shooting modes that give you control over what types of shots you take. Ones you might come across are Av (aperture priority), Tv (time value), and P (program).

Q Does a D-SLR camera have a shutter delay?

A Like a point-and-shoot camera, D-SLRs have a short delay between the moment you press the shutter and when the camera snaps the image; however, this delay is generally shorter. D-SLRs also allow you to adjust the shutter speed to produce different exposures in your images.

Q What types of file formats do D-SLR cameras support?

A D-SLRs are compatible with some or all of the following image formats: RAW, JPEG, DPOF, MOV, TIFF, and +JPEG.



Digital Imaging Glossary



Are you confused about what the lingo on camera boxes means? Use this glossary to help decode the world of digital imaging.

aperture—An iris-like diaphragm opening that can expand and contract the lens to let you control the amount of light that passes through it, thus affecting the exposure. The term “f-stop” is used interchangeably with aperture.

burst mode—A camera mode that lets you capture several shots consecutively after pressing the shutter only once.



CCD (charge-coupled device)—This is the camera’s image-sensing component. It converts light into energy that can be stored as digital data on your camera.

depth of field—The area that is in focus in front of and beyond the subject of your photo.

digital zoom—Magnifies an image digitally by cropping it and filling in the rest with interpolated pixels, thus degrading the quality. Even if the numbers are impressive, never choose a camera based on digital zoom.

f-stop—See aperture. Smaller f-stop numbers mean a wider lens opening; larger f-stop numbers mean a narrower lens opening.

ISO—For digital cameras, the ISO setting measures the sensitivity to light (similar to how it does with film). Digital camera ISO settings, such as 200, 400, etc., should capture photos as if one were using film with such a speed. Lower ISO settings mean you need more light and vice versa.

LCD—The screen on the back of the camera that lets you see a live-action view of your subject or your photo after you’ve taken it.

lens—The apparatus on the front of the camera that gathers and directs light toward the imaging device. In a digital camera, the lens probably has both an optical and digital zoom.

megapixel—Approximately 1 million pixels. The higher the megapixel count, the higher the resolution and the more you can crop, which means (in general) better-quality photos.

memory card—Because digital cameras have very little onboard memory, they need flash memory cards to store

more than a dozen or so images. The type of memory card you need depends on the make and model of your camera. Some of the most popular memory cards are Secure Digital, MultiMedia Card, CompactFlash, and Sony Memory Sticks. In general, memory cards are quite small.

noise—The small statistical variations among pixels that lead to (usually) minor distortions of color in a photo.

optical zoom—The camera’s mechanical ability to move the lens physically closer to your subject. With optical zoom, the higher the number (such as 5X or 10X), the better. When choosing a camera, always consider the optical zoom, not the digital zoom. Digital zoom artificially adds pixels.

resolution—The number of pixels in an image. The higher the resolution, the more detail and quality in a photo. Resolution is measured in a proportion (such as 2,272 x 1,704).

shutter—A mechanism that opens and closes to allow light to pass through the lens. You can usually control the camera’s shutter speed.

shutter speed—The length of time a camera’s shutter is open to let light through the lens to hit the sensor, which records the image. This is expressed in fractions of a second: For instance, a shutter speed of 1/250 means that the shutter is open for 1/250th of a second.

viewfinder—The small opening in the camera that the user looks through to frame a shot. Some digital cameras don’t have a viewfinder and use only the camera’s LCD to frame the shot.

white balance—Light levels are adjusted electronically to ensure whites in a certain environment are pure, leading to more lifelike colors. White balance can usually be manually adjusted, too. **FG**

Which Point-&-Shoot Camera Is Best For You?

If you're a little confused about the most important features in a digital camera, you're not alone. In this chart, we compare features from select digital cameras, and we also explain what these features mean.

		Resolution; Optical zoom	Shutter speed	Memory card	LCD size	Battery life	ISO	Movie mode
What It Means		More pixels mean bigger and clearer prints; Moves the lens closer to your subject	A faster shutter speed will let you snap action photos without blur	Removable card that stores your photos in your camera	The LCD is the screen on the back of the camera	Based on how many shots you can take on a single charge	A higher ISO lets you take better photos in low-light settings	Lets you record short video clips on your digital camera
	Pentax Optio E80 MSRP: \$129.95* SKU 9555849	10MP; 3X	1/4 to 1/2,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400	Yes
	Fujifilm FinePix Z37 MSRP: \$149.95* SKU 9464741	10MP; 3X	3 to 1/1,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600	Yes
	Canon PowerShot A3100 IS MSRP: \$179.99* SKU N/A	12.1MP; 4X	1 to 1/1,600 seconds	SD/SDHC/ SDXC/ MMC/ MMCplus	2.7 inches	240 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Fujifilm FinePix F72EXR MSRP: \$279.95* SKU 9503469	10MP; 10X	1/4 to 1/2,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400, 12800	Yes
	Sony Cyber-shot DSC-WX1 MSRP: \$329.99* SKU 9517025	10.2MP; 5X	2 to 1/1,600 seconds	Memory Stick Duo/ PRO Duo	2.7 inches	350 shots	Auto; Manual: 160, 200, 400, 800, 1600, 3200	Yes
	Samsung DualView TL225 MSRP: \$349.99* SKU 9501791	12.2MP; 4.6X	1 to 1/2,000 seconds	microSD/ micro-SDHC	3.5 inches; 1.5 inches front LCD	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200	Yes
	Canon PowerShot SX20 IS MSRP: \$399.99* SKU 9455127	12.1MP; 20X	15 to 1/3,200 seconds	SD/SDHC/ MMC/ MMCplus	2.5 inches	340 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Nikon Coolpix S1000pj MSRP: \$429.95* SKU 9613973	12.1MP; 5X	2 to 1/1,500 seconds	SD/SDHC	2.7 inches	220 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200, 6400	Yes

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Which D-SLR Is Best For You?

As D-SLR prices keep coming down, more photographers are turning to them, both as a first camera and as a trade-up to something better. In this chart, we'll help you sort through some of the features and performance specs from select D-SLR cameras.

	Resolution	LCD size	ISO range	Kit lens	Burst speed	Shutter speed
What It Means	Image sensor in megapixels; more means a bigger image	Diagonal measure of screen on back of camera	A higher ISO range will let you take better photos in low-light situations	Standard lens bundled with the camera body	Frames per second (fps) you can shoot while in burst mode	The wider the range, the greater the gamut of long exposures to frozen action
	Sony Alpha A230L MSRP: \$449.99* SKU 9342473	10.2MP	2.7 inches	10 to 3200	18-55mm standard zoom lens	2.5fps 30 to 1/4,000 seconds
	Nikon D3000 MSRP: \$549.95* SKU 9456803	10.2MP	3 inches	100 to 1600	18-55mm f/3.5-5.6G VR lens	3fps 30 to 1/4,000 seconds
	Sony Alpha A330L MSRP: \$549.99* SKU 9342142	10.2MP	2.7 inches	100 to 3200	18-55mm	2.5fps 30 to 1/4,000 seconds
	Pentax K-x MSRP: \$649.95* SKU 9555787	12.4MP	2.7 inches	200 to 6400	18-55mm	4.7fps 30 to 1/6,000 seconds
	Canon EOS Rebel T1i MSRP: \$749.99* SKU 9318954	15.1MP	3 inches	100 to 3200	EF-S 18-55mm f/3.5-5.6 IS lens	3.4fps 30 to 1/4,000 seconds
	Olympus E-P1 MSRP: \$799.99* SKU 9463573	12.3MP	3 inches	100 to 6400	14-42mm f/3.5-5.6 lens	3fps 60 to 1/4,000 seconds
	Canon EOS 7D MSRP: \$1,699* SKU 9491944	18MP	3 inches	100 to 6400	N/A (body only)	8fps 1/60 to 1/8,000 seconds
	Nikon D300s MSRP: \$1,699.95* SKU 9457349	12.3MP	3 inches	200 to 3200	N/A (body only)	7fps 30 to 1/8,000 seconds

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Digital Camcorder Is Best For You?

Digital camcorders come in a number of formats: DVD, hard drive, flash drive, MiniDV, and high definition are the most common. By comparing the following digital camcorders, you can determine which recording format and product best fit your style.

	LCD size	Optical zoom; Digital zoom	Recording speeds	Memory card	Digital still resolution	Lines of resolution
What It Means	Diagonal length of viewing screen	Two methods for magnifying depth of field; optical zoom is better	The speeds a particular camcorder can utilize during recording	Compatible flash card types (cards not included unless noted)	The number of megapixels the camcorder can capture in still images	Number of lines of horizontal resolution; the higher the number, the greater the detail
 Samsung SMX-F34BN MSRP: \$279.99* SKU 9267189	2.7 inches	34X; 1,200X	SP	SD/SDHC/MMC	N/A	480
 Canon FS200 MSRP: \$299.99* SKU 9239567	2.7 inches	37X; 2,000X	XP/SP/LP	SD/SDHC	N/A	480
 Samsung HMX-H104 MSRP: \$579.99* SKU 9369765	2.7 inches	10X; 100X	N/A	SD/SDHC	N/A	1,080
 Canon VIXIA HF20 MSRP: \$799.99* SKU 9239512	2.7 inches	15X; 300X	MXP/FXP/XP+/SP/LP	SD/SDHC	3.3MP	1,080
 Sony HDR-CX500V MSRP: \$1,099.99* SKU 9403497	3 inches	12X; 150X	FH/HQ/SP/LP	Memory Stick PRO Duo	12MP	1,080
 JVC Everio GZ-HD300 MSRP: \$599.95* SKU 9186141	2.7 inches	20X; 200X	UXP/XP/SP/EP	microSD/SDHC	N/A	1,080
 Panasonic HDC-HS250 MSRP: \$899.95* SKU 9206995	2.7 inches	12X; 700X	HA/HG/HX/HE	SD/SDHC	10.6MP	1,080
 Sony DCR-SR47 MSRP: \$349.99* SKU 9178258	2.7 inches	60X; 2,000X	HQ/SP/LP	Memory Stick PRO Duo	0.3MP	480

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Find The Nikon COOLPIX That Fits Your Life



Nikon's COOLPIX cameras won't let you miss the joy in life, thanks to their fast start-up time, shutter speed, and auto focus. Each COOLPIX offers an ultra-compact and stylish design that will deliver sharp and colorful photo results with its NIKKOR lens. With a wide range of Nikon COOLPIX cameras available, it couldn't be easier to find a camera that can keep up with your photography needs.

At the heart of the image.™

Product Name	Nikon COOLPIX L20 9220167	Nikon COOLPIX S220 9220185	Nikon COOLPIX S570 9455369	Nikon COOLPIX S230 9220201	Nikon COOLPIX L100 9220229	Nikon COOLPIX S630 9223734	Nikon COOLPIX S70 9455412	Nikon COOLPIX P90 9223743
Additional Colors Available			9224519 9224494 9224528	9463699 9464616 9464661	9225224 9225215 9225233		9225279 9225242 9225251	9463662
MSRP	\$119.95*	\$149.95*	\$179.95*	\$179.95*	\$229.95*	\$249.95*	\$349.95*	\$399.95*
Resolution	10MP	10MP	12MP	10MP	10MP	12MP	12MP	12.1MP
Zoom	3.6X optical; 4X digital	3X optical; 4X digital	5X optical; 4X digital	3X optical; 4X digital	15X optical; 4X digital	7X optical; 4X digital	5X optical; 4X digital	24X optical; 4X digital
LCD Monitor	3 inches	2.5 inches	2.7 inches	3 inches	3 inches	2.7 inches	3.5-inch OLED	3-inch tilt and swivel LCD
Internal Memory & Compatible Cards	20MB internal & SD/SDHC	44MB internal & SD/SDHC	47MB internal & SD/SDHC	44MB internal & SD/SDHC	44MB internal & SD/SDHC	44MB internal & SD/SDHC	20MB internal & SD/SDHC	47MB internal & SD/SDHC
ISO	Up to 1600	Up to 2000	Up to 3200	Up to 2000	Up to 3200	Up to 6400	Up to 6400	Up to 6400
Shooting Modes	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 17 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 17 Scene Modes, plus Auto	16 Scene Modes, Programmed Auto, Shutter-Priority Auto, Aperture-priority Auto, and Manual
Movie Mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes (HD)	Yes
Touch-Panel Control	No	No	No	Yes	No	No	Yes	No
Battery Type	2 AA batteries	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery	4 AA batteries	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery
Battery Life	240 shots with alkaline, 630 shots lithium-ion	180 shots	220 shots	160 shots	350 shots with alkaline, 900 shots lithium-ion	220 shots	200 shots	200 shots

* Prices listed in this issue are for general reference and may vary from retailer pricing.

Canon

Digital Camera Now You've Got The Power



Canon PowerShot A3100 IS

MSRP: \$179.99

SKU: N/A

www.usa.canon.com

Quick Overview

If you're looking for a camera that makes taking great photos as easy as pushing a button, you've found it. The Canon PowerShot A3100 IS includes Smart AUTO, which will select the appropriate camera settings for the scene you're shooting. A 4X optical zoom lets you get close to the action, and 12.1MP mean you can print your images in sizes up to 13x19 inches. You'll get all of these features in a camera with a design thin enough to bring anywhere.

Perfect For

People looking for a camera that is packed with features yet easy to use.

Outstanding Benefits

- Powerful A-Series camera that has 12.1MP and a 4X optical zoom.
- The Smart AUTO feature will do the work for you: It intelligently selects the proper camera settings based on 18 predefined shooting situations.
- Large, bright 2.7-inch LCD makes viewing images a breeze.
- Low Light mode gives you improved shooting capabilities in dimly-lit settings.
- The lithium-ion rechargeable battery lets you take approximately 240 shots on one charge.
- Optical Image Stabilizer detects and compensates for camera shake.

Coolest Feature

New scene modes, such as Super Vivid for additional bursts of color and Poster Effect for a unique artistic look, give the shooter more creative freedom to capture images her way.

NOTEWORTHY

Accessories & Services

**UV FILTER**

- Protects digital camcorder and D-SLR lenses from dust, dirt, fingerprints, and scratches
- Get clearer, more detailed videos or photographs when you're shooting in bright conditions

**EXTRA MEDIA**

- Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space
- Consider having several memory cards with smaller capacities instead of one card with a larger capacity; that way, if something goes wrong with one, you'll still have a backup
- For your digital camcorder, keep more recording media in your bag than you think you'll need, just in case

**ADDITIONAL LENSES/CONVERTER LENSES**

- Extra lenses for D-SLRs and converter lenses for digital camcorders can enhance your results by extending your field of view, reducing glare, and more
- Telephoto lenses enable you to zoom in from far away, wide-angle lenses give you the ability to get a full view even if you're close to the subject, and macro lenses will let you achieve up-close, detailed shots of your photo subject

**EXTERNAL FLASH**

- Light up your subjects from greater distances
- Offers better control of lighting conditions when taking photos by directing the angle of the flash

**SPARE BATTERIES & CHARGERS**

- Make sure you're never caught without the power needed to capture the perfect moment
- Whether your camera uses proprietary batteries or AAs, keep at least one fully charged spare or set in your camera bag
- An additional battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're traveling

**TRIPOD**

- Tripods are an easy way to ensure steady video footage
- Pan while recording video in one smooth motion
- Use a tripod and your camera's timer to get a picture of the entire group without needing someone to man the camera
- Keeps your camera steady while you're shooting close-up or distance shots, which can prevent photo blurring

**REMOTE SWITCH**

- A longer cable lets you snap photos without having to touch the camera, which can also reduce camera shake
- May enable the user to lock the shutter for longer exposure times

**DIGITAL IMAGING SERVICES**

Once you've set your sights on the camera or camcorder you want, consider taking advantage of the digital imaging services offered by your local CE retailer. Not only can you protect your investment, but you can also discover photography and videography skills that will make your photos and videos picture-perfect.

- D-SLR or Camcorder Service Plan
- D-SLR Training Course
- Camcorder Training Course

CHOOSE

The Right Notebook

Features For Every Need

FEATURE

Premium Notebook

- High-end graphics, powerful processing, and plenty of system memory let you easily edit photos and video.
- Powerful components may use battery life more quickly than less powerful notebooks.
- Some models feature Blu-ray Disc players, so you can watch HD movies.
- Most models have screen sizes of 13 to 19 inches.
- Can be used as a desktop replacement that takes up much less space in your office.

Gaming Notebook

- A high-performance processor and plenty of RAM ensure your computer can run games smoothly, without performance lags or glitches, while a dedicated graphics card will make your games look great.
- Powerful gaming components may consume battery life faster than other notebook types.
- Hard drives with 500GB or more of storage space give you plenty of room to store your favorite games.
- Most models feature larger screens between 15 and 17 inches, giving you more of a viewable area to play in.
- Best for those who meet up with friends for gaming parties or who want to game in any location.

Everyday Notebook

- Most models feature up to 4GB of RAM, so you can simultaneously perform multiple tasks without your computer getting bogged down.
- Some models feature a 6-cell battery, which keeps you working longer.
- Integrated CD/DVD drive lets you play discs with music, photos, or movies and might let you back up files by burning them to a disc.
- Screen sizes from 12 to 17 inches offer a variety of choices for viewing area.
- Perfect for those with general computing needs, such as surfing the Web or working on projects, or people who want a well-rounded computer that doesn't break their budget.

Ultra-Thin Notebook

- A lower-voltage processor means less power consumption while you're on the go.
- Increased battery life allows you to work longer without having to find an outlet.
- Most do not include a CD/DVD drive, so the notebook design is lightweight and compact for on-the-go use.
- Many models weigh about 4 pounds or less, which makes these models perfect for daily travel, such as to work or the coffee shop, or use around the house.

Small-Business Notebook

- Most models feature Core 2 Duo processors and 2 to 4GB of RAM, giving you the right amount of power to get the job done.
- A 6-cell battery, which is available on most models, keeps your computer running longer so you can complete work projects.
- A hard drive with 320 to 500GB of storage space gives you plenty of room to store business and personal documents.
- Models are built with increased durability and include advanced security features such as a fingerprint reader or file encryption.

NETBOOKS

Practicality, Purpose & Pricing

Netbooks are turning out to be incredibly practical for anyone with a relatively mobile lifestyle. Designed to keep you connected to the Internet as frequently as possible, these feather-weight PCs can give you liberal access to your email accounts, social networking sites, blog feeds, and video messaging services.

We've created a breakdown of what you can expect from a netbook in terms of portability, functionality, and affordability. So, take a look at the standout features and see how they fit into the price range that's comfortable for your lifestyle. **FG**

BY JOANNA SAFFORD

Netbook Benefits & Uses

- Best solution between a smartphone and notebook in terms of size; you can substitute a netbook for a smartphone or add it as an accessory to your desktop PC.
- Extremely portable but lacking an optical drive.
- Built-in Wi-Fi connectivity for connecting to your in-home wireless network or public hotspot.
- Most netbooks have built-in Web cams, some hard drive storage, memory expansion options, and no less than three hours of battery life.
- Ideal for business professionals who rely on email when they're away from the office.
- Great for students who use Web-based applications on the go.
- Can be used for transporting photos and music files.



FEATURE

\$200 to \$299

Typically equipped with 1GB of RAM and around 150GB of data storage, budget-friendly netbooks are just right for anyone who needs to run some basic programs while on the go. Extra features might include a Web cam and decent battery life (three to six hours).

\$300 to \$399

In this price range, you'll find netbooks with screen sizes between 10 and 12 inches, and some might be in a widescreen format. If you generally take lots of photos when you're out and about, look for a model with a media card reader, which will let you transfer new photos to your computer and then post them online immediately.

\$400 to \$499

When you opt for a netbook in the next pricing tier, you're essentially paying for more storage (sometimes up to 250GB) and a few more features. Look for preinstalled software suites with trial office programs and a PDF reader: These extras are ideal for a student or traveling businessperson who needs programs for accessing a range of document types. These netbooks will likely include Bluetooth (pairs devices without using wires) compatibility and an extra-long battery life (up to nine hours for some models).

\$500 to \$599

Netbooks that fit into this price category have specs similar to notebooks, save for the CD/DVD drive and bulkier design. A high-end netbook should include most of the features already mentioned, with the addition of a GPS device and an HDMI output for viewing high-def video on connected devices.

CONNECTIVITY 101

Get Internet Access Here, There & Everywhere

Internet connectivity, once the domain of the technologically savvy, is now as ubiquitous and ingrained in most people's daily lives as driving a car. And now, there are more ways than ever to access it. **FG**

BY SETH COLANER



Wired Ethernet

A wired Ethernet connection will give you the fastest Internet access. After you set up a subscription with an ISP (Internet Service Provider), you use an Ethernet cord to connect your computer to the port in the wall.

The downside to an Ethernet connection is that your computer is tethered to that cable. However, for your home office or work computer—any computer that you would use at a desk, really—wired Ethernet is an ideal way to access the Internet. Netbooks and notebooks have Ethernet ports, but using them will limit your mobility with those devices to however long the cord is.

What You Should Know

- Offers the fastest Internet performance available.
- Requires a subscription to a cable-based Internet service.
- Ideal for the home office or workplace.

How To Connect

This chart shows you the various options for Internet connectivity based on the device you're using.

	Wired Internet	Wi-Fi	3G	Mobile Broadband Card
Notebook	Yes	Yes	Depends on model	Yes
Netbook	Yes	Yes	Depends on model	Yes
Smartphone	No	Depends on model	Yes	No

Connecting & Staying Connected

- There are several ways to connect to the Internet: wired Ethernet, Wi-Fi, and 3G.
- Wired Ethernet is the fastest Internet connection available and requires an ISP subscription.
- Wi-Fi requires wired Ethernet service and a wireless router.
- 3G service plans are available from mobile service providers, not cable providers.
- Smartphones use 3G for broadband Internet connectivity almost exclusively.
- Mobile broadband cards extend 3G capabilities to laptops without a 3G chip and require a service plan.

Wi-Fi

Wi-Fi is wireless Internet access that piggybacks on wired Ethernet: In order to have Wi-Fi, you first need a wired Ethernet connection. With wired Ethernet service set up, you can then create a wireless network. All you need to do is get a wireless router, connect the wireless router to the Ethernet cable coming out of your wall, and configure the wireless network via a few simple setup wizards.

Although Wi-Fi typically offers the fastest Internet performance after wired Ethernet, the speed of the network depends on how many

computers are using the network at one time—the more users, the slower the network will perform.

Wi-Fi won't cost anything more than your wired Ethernet service and the cost of a wireless router. But keep in mind that although a Wi-Fi hotspot will give you wireless Internet access throughout your home, its radius only extends a few hundred feet.

If you're away from home, you might be able to access public Wi-Fi, as many businesses, restaurants, airports, hotels, and even municipalities have Wi-Fi hotspots available.

What You Should Know

- A home setup is easy to configure and requires wired Ethernet service and a wireless router.
- Also available for free or a small fee in many public places.
- Has a limited range of a few hundred feet.
- Ideal for laptops, netbooks, and some other mobile devices.

3G Coverage

The hottest Internet connectivity technology these days is 3G. Smartphones and some netbooks and laptops include 3G chips.

Whereas wired Ethernet access is gained by subscribing to a cable-based service, 3G coverage comes from mobile phone companies; thus, you subscribe to 3G through your mobile service provider, not a cable provider. Many service providers offer unlimited use for a monthly fee, not unlike how you pay for wired Ethernet service. Others allow users to pay for a certain amount of usage each month and pay à la carte for additional 3G use, similar to many mobile phone payment plans.

Although slower than a typical Wi-Fi network, 3G offers acceptable Internet performance for mobile devices. The primary benefit of 3G is that coverage is far greater than Wi-Fi. Instead of being confined to a hotspot built on a wired Ethernet connection, 3G Internet access is available anywhere your mobile service provider offers coverage.

What You Should Know

- Service is provided by mobile service providers instead of cable providers.
- Fast, but not typically as fast as Wi-Fi.
- Requires a service subscription.
- Ideal for smartphones, netbooks, and some laptops

Mobile Broadband Cards

If you own a laptop or a netbook without a 3G chip, you can still access 3G network coverage using a mobile broadband card. The card fits in a laptop's card slot or USB port (depending on the card) and functions as a sort of antenna, receiving 3G network signals and enabling you to access the Internet via the 3G network.

You still need a subscription to a 3G service plan; without the service, the card won't work. However, the service plan goes with the card, so you can use it on any laptop (or even a desktop) equipped with the correct card slot.

What You Should Know

- Requires a 3G subscription.
- Enables a device without a built-in 3G chip to use 3G Internet service.
- Can be used on any computer with a compatible card slot or USB port.
- Best for laptops and netbooks that don't have a 3G chip.

POWER On The Go

Keep Your Mobile Devices Working Longer

The only thing that's worse than a low battery indicator on your smartphone, notebook, or netbook is a blank screen that's caused by a completely drained battery. Whether you're a frequent traveler, commuter, student, or just a parent on the go, finding out your favorite device has spent its last drop of power is never fun. Read on for some tips to ensure you're never left wanting for power.

FEATURE

It Starts With The Device

Finding a device that offers the appropriate battery life for your lifestyle is the first step to perpetual power. For instance, if you plan to use a mobile computer on long coast-to-coast flights or long vacation drives, then you should opt for an ultra-mobile notebook or a netbook, which boast battery lives in excess of six hours. Larger notebooks have shorter battery lives, which means you'll get less time in between charges. Thus, these are better-suited to users who will only be away from an outlet for short periods, if ever.

Buying a smartphone based on a battery budget is a little more difficult because battery life can vary widely based on the size of the phone, how you use the phone, and other factors. Most phones tend to last a day or more on a single charge, but if you frequently use data services that utilize power-demanding Wi-Fi

or 3G networks, then your battery may not last more than four hours. Your best bet is to get multiple charging accessories.

Power Accessories

Sometimes, you need a few battery-bolstering accessories to prevent unexpected outages. You should have a car

duplicate charger at work. Or, a USB charger for your smartphone is an economical and handy alternative to a wall charger because it will work with any USB-based device. Other charging options, such as multiple-device charging stations, can keep devices and chargers organized and out of sight.

If you regularly need a car charger, wall charger, and USB charger, check to see if a combo pack is available for your smartphone or device.



Buying Replacements & Spares

If you find that your battery fails to hold a charge or only powers your device for a couple hours or so, it might be time to invest in a replacement. To figure out what battery you need, consult the device's users manual or ask your local CE retailer associate. While this option is generally a

Power When You Need It

- Make sure battery life is a major purchasing factor if you plan to use your devices frequently when you're on the go.
- Buy accessories that will keep your devices powered up when you're not near a power outlet.
- Consider bringing a spare battery for your device with you when you travel.

charger for devices you use frequently, particularly your smartphone. These can be extremely useful for commuters or people who are frequently in their cars, but those who don't spend as much time on the road might want to invest in multiple wall chargers instead. This way, you have a charger at home and a

pricier alternative to our previously mentioned accessories, it can be a real lifesaver. If you're often away from outlets for extended periods, then you might want to keep spare netbook, notebook, and/or smartphone batteries on hand. **FG**

BY ANDREW LEIBMAN

SECURITY & Maintenance

Keep Your Notebook Or Netbook Clean

Notebook and netbooks don't require a great deal of maintenance, but there are a few accessories and software investments that will keep your PC working properly, which can also greatly extend the life span of your notebook or netbook.

Stay Secure

Antivirus and anti-malware software should be at the top of your PC security list, because it's vital to keep hackers and intruders from reaching the personal information stored on your computer or destroying your files.

At a basic level, antivirus software will prevent your computer from getting viruses, worms (programs that spread

PC and steal private information, such as your passwords, and monitor your Web habits. Both Trend Micro's Anti-Virus + AntiSpyware 2010 (\$39.95; us.trendmicro.com) and Webroot's AntiVirus With Spy Sweeper 2010 (\$39.95; www.webroot.com) offer virus and spyware protection.

If you want to further protect your PC against online threats, such as spam and identity theft, you'll need an antivirus program with a built-in firewall, such as Kaspersky's Internet Security 2010 (\$79.95; www.kaspersky.com) or Norton's 360 3.0 (\$79.99; www.symantec.com). Basic firewalls only monitor data coming into your PC, but a two-way firewall monitors both data coming in and leaving your PC. This way, if a cybercriminal or

with a laptop lock, such as Targus' Defcon CL Notebook Cable Lock (\$24.99; www.targus.com). This accessory lets you lock your computer to an unmovable object with a cable, making it ideal for frequent travelers.

Maintenance Accessories

Heat and dust are the primary elements you'll want to keep away from your notebook or netbook, because they can ruin the internal components. To move heat away from the packed internal hardware, you'll need a cooling base with built-in fans, such as Targus' Laptop Chill Mat (\$39.99). Typically, these mats are USB-powered and have rubber grips to hold your PC in place.

Maintenance Must-Haves

- Antivirus software helps keep Internet threats from infecting your PC.
- A security program with a firewall keeps dangerous content from reaching your portable computer and makes sure your personal data doesn't leave it.
- Notebook cooling devices push heat away from the internal components to prevent damage and improve efficiency.
- Antistatic monitor wipes help maintain a pristine screen.

from PC to PC), and Trojan horses (apps that allow hackers to remotely access your PC). Most antivirus programs also include an antispyware component, which helps identify and remove malicious programs that are hidden on your

virus gets past your initial defenses, the firewall can stop any sensitive information from leaving your computer.

In addition to security software, you can protect your laptop from theft

The best tool for removing dust is a can of compressed air with a straw extension, so you can blow out debris stuck in hard-to-reach places, such as underneath the keyboard. And to keep your laptop monitor looking bright, you should invest in antistatic monitor wipes. The antistatic wipes are premoistened with a quick-drying no-streak compound to ensure you'll remove dust, dirt, and lint from the monitor without injuring the screen. 

BY NATHAN LAKE



PORTABLE Storage

Carry Data With You

Sometimes, we should marvel at all of the portable electronics in our lives. From smartphones to notebooks, MP3 players to cameras, we carry around more processing power than the Apollo missions to the moon.

But processing power goes hand in hand with data, and data needs someplace to be. Here's a look at three major categories of portable storage devices. **FG**

BY MARTY SEMS

Portable Hard Drives

Mainly used as backup drives for laptop and desktop computers, these add-on storage units can also be used to add capacity to DVRs, network storage systems, and more.

Portable units built on 2.5-inch hard drives are slim enough to slip into your notebook bag or pocket, yet they can hold 250GB to 1TB of your data. Thus, they give you an easy way to bring your music collection with you on vacation or to tote high-resolution design materials to a business meeting.

Most portable drives use the USB 2.0 interface, but keep an eye out for drives with the new USB 3.0 connection. When used with a USB 3.0-compatible port and cable, the new interface will help external drives run faster than ever. It's backward-compatible with USB 2.0 and 1.1 ports, too.

Perfect for: Mobile computer users and business travelers.



Memory Cards

As digital cameras captivated the world, so, too, did they introduce the masses to the flash memory card. Today, SD, CompactFlash, and other formats are everywhere. You'll find memory cards of up to 32GB in smartphones, GPS devices, eReaders, personal media players, and camcorders. And you'll find memory card readers (read/write drives) in notebooks, desktop PCs, photo printers, game consoles, HDTVs, and more.

If your consumer electronics all support a particular type of memory card, such as microSD, you could enjoy your media files without ever touching a computer. For instance, you might be able to pop the card out of your camera, insert it into a reader in the side of your TV, and start a photo slideshow. If one of your guests wants a hard copy of a particular image, eject the memory card and slip it into your photo printer.

Perfect for: Users of mobile media devices.

Flash Drives

These common widgets are flash memory devices that are both recordable and erasable. They range from a fingernail to nearly a credit card in size, but they're all extremely pocketable. These are generally built much tougher than any hard drive, and nearly all have USB 2.0 connectors.

Flash drives can store 2 to 32GB of data or more, depending on the model, so they see a lot of use as informal backup devices for works in progress, important documents, and so on. They can also be used as data transfer mechanisms for moving photos, presentations, video clips, and more between computers. When you're over at your mother's house, for instance, you'll be able to take home copies of her photos from the most recent family gathering. Or, IT workers can use flash drives to carry around software that can help them fix malfunctioning computers.

Perfect for: Anyone who needs to take digital data with them on the go.

MOBILE Mice

The Evolution Continues

The line that differentiates a mobile mouse from a desktop mouse has become almost too fine to see. Traditionally, size has been the primary difference between the two, but even that's become less true recently as some manufacturers have expanded the girth of their mobile mice models, quite possibly in response to complaints that some mobile mice are too small to be used comfortably. So, what exactly sets a mobile mouse apart from a desktop model? Read on.

Small In Stature

The chief purpose of notebook mice has historically been to give users an alternative to using a notebook's touchpad—something that's particularly advantageous for extended computing sessions. The chief trait of notebook mice, then, has been their small, travel-friendly size, with some models being just egg-sized or smaller. Beyond conserving space in a notebook bag, the scaled-down size makes a mobile mouse adaptable to diverse workstations, such as an airplane seat's fold-out tray, a tabletop in a coffee house, or a cramped desktop in a dorm room.

That said, especially in the last year, more mobile mice have surfaced to satisfy those who find using a small mouse awkward and those who equally use a desktop PC and notebook and want to maintain the familiarity of using a larger desktop mouse. Thus, you

will be able to find the right size appropriate for your needs.



Make A Connection

You'll find a mix of wired and wireless mice among desktop models. Although there are wired mobile mice, including some with a convenient retractable USB cord, most are wireless and use Bluetooth or RF (radio frequency) connections.

Of the two, Bluetooth is arguably more desirable for mobile users, as most new notebooks and netbooks integrate Bluetooth connectivity, meaning a Bluetooth mouse won't require using a USB port to plug in an RF receiver as an RF-based mouse will. Some Bluetooth mice provide a USB Bluetooth dongle for notebooks/netbooks without built-in Bluetooth. However, one negative of wireless mice is the occasional lag time they produce vs. a wired mouse.

The Edge Goes To . . .

Although the differences between mobile and desktop mice are becoming less distinct, each type still offers general advantages over the other.

	Mobile Mice	Desktop Mice
Battery life	x	
Bluetooth support	x	
Cost	x	
Ergonomic designs		x
Gaming performance		x
Programmable buttons		x
Tracking & precision		x
Travel-friendly size	x	

Mouse To Mouse

Generally speaking, differences between mobile and desktop mice include:

- Mobile mice are smaller.
- The majority of mobile mice are wireless models.
- Mobile mice support longer battery life.
- Mobile mice performance still lags behind desktop mice but is catching up.

The Nitty Gritty

Although it's not an absolute, mobile wireless mice are typically kinder on battery life than desktop models and often include battery life-saving features, such as an On/Off switch. Mobile wireless mice also typically integrate a convenient slot in or on the mouse to store an RF receiver when not in use.

Conversely, desktop models might provide multiple and programmable button options and ergonomic designs, and some offer advanced features such as switching between wired and wireless modes. They also offer better gaming and tracking performance via superior laser and optical implementations.

Ultimately, choosing a mobile mouse over a desktop model really comes down to your specific preference and also your lifestyle needs. For example, if you are a student who shuffles a notebook between the dorm room, a science lab, the library, the student union, an off-campus job, and trips home, a space-saving mobile mouse can definitely pay dividends. **FG**

BY BLAINE FLAMIG

PROTECT Your Notebook & Netbook

Get A Case, Sleeve, Or Bag

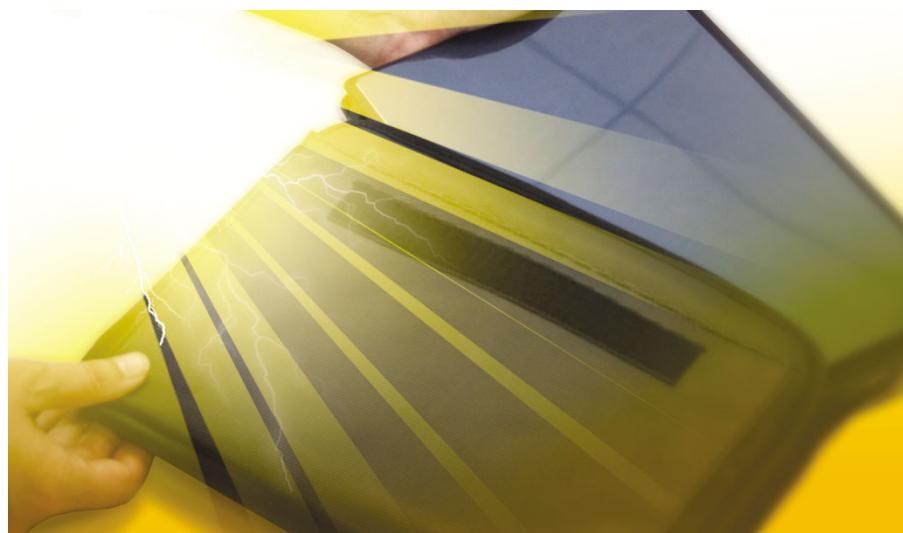
Because computing is increasingly oriented around portability, cases and bags are even more essential for carrying and protecting your notebook and/or netbook. Depending on how you use your computer and where you take it, you'll need to decide which option is best-suited for your lifestyle. Take a look at our comparison of three available types: sleeves, bags, and cases. **FG**

BY JOANNA SAFFORD

Sleeves

A laptop sleeve is similar a sock, in a sense. These are designed to protect your computer from small scratches or bumps, and they're ideal for short trips, such as when you carry your netbook from your house to the coffee shop down the street or from your home office on the second floor to your wireless home theater in the basement. It can also be used as additional protection for your netbook or notebook when it's stored inside a carrying bag or backpack. Sleeves are typically constructed out of Lycra, neoprene, and/or microfleece, some of which are equipped with handles or shoulder straps. Certain sleeves feature a detachable inner wall or triple-layered interior padding to protect the computer even while it's inside the sleeve.

Perfect For: Making sure you don't scratch or bump your notebook or netbook or get it dirty.



Bags

You can think of a laptop bag as being like a suitcase, because it can carry more than just your laptop or netbook, including chargers, flash drives, MP3 players, and other necessities. If you're looking for durability, a bag is a great option because it features the most layers of protection and exterior reinforcements such as thick padding and separated accessory holders. These are available as backpacks, messenger bags, stylish totes, or courier bags, meaning you'll have a suitable option for taking your computer with you whether you're on an airplane for business, traversing the country by train, or walking to your next class.

Perfect For: The active notebook or netbook user who requires a durable bag with room to spare.

Cases

A case is essentially a combination of a laptop bag and sleeve, which means it can protect your computer and carry lightweight items. Many cases will feature specific facets that make them ideal for safely and comfortably toting your computer, such as faux-fur interior lining, ergonomic straps (across the shoulder), heavy-duty zippers, and a carrying handle. Popular computer case styles include briefcases with built-in compartments and hardshell plastic casings. They are also available as ladies' totes, conveniently equipped with accessory storage, well-designed shoulder straps, and quality materials.

Perfect For: Anyone who wants a practical and stylish protection option.

NEW

FOR 2010



Intel's Smartest Processors Yet

New Processors For A New Computing Age

COMPUTERS

The last time you went computer shopping, you had everything figured out. You knew to get the highest gigahertz processor, tons of RAM, and as much hard drive capacity as you could afford. If you followed these rules, you'd get a decent machine. But it's 2010, and a lot has changed since you last bought a PC; 6GB of RAM won't necessarily outperform a system with 4GB of RAM, a solid-state hard drive no larger than a deck of cards can top your old hard drive in every way imaginable, and processors capable of 4- and 8-way processing clearly outperform the high-clocked processors of yesterday. To get the most out of your next computer purchase, make sure a new 2010 Intel Core Processor (www.intel.com) is inside.

Pinning Down The Processor

Hands down, the processor has experienced the biggest advancements in computing, and wrapping your head around this central component will help you choose the best PC for your needs. But to determine which of Intel's new 2010 Core Processors best suit your lifestyle, you need to understand what exactly these processors can do and how they're smarter than ever before.

You already know that the processor is important and no computer can run without one. In fact, the processor is so important that it's often referred to as "the brain" of the PC, and similar to a brain, it processes nearly everything that occurs on your PC, from aspects of

software and Web video playback to lending a helping hand when converting media files and rendering visual effects on your photos. The processor is even responsible for the performance of a video game. It handles the most complex processes involved in games, such as artificial intelligence and physics, allowing the graphics adapter more bandwidth to enhance the images. Processors can also handle the complex instructions required to play high-definition video and Blu-ray Discs. Multitasking is another area in which the processor feels right at home; it lets your system perform multiple actions at the same time without slowing to a crawl or grinding to a halt.

Intel's Pentium processors are still around, and they offer classic and reliable performance for standard apps. But

Intel's new 2010 Core Processors aren't your father's processor; they're built smarter to enhance your computing experience with today's and tomorrow's apps and HD computing.

Intel's Secret Sauce

The processor is as close to a universal tool as a computer has in its toolbox. And never has that been truer than it is with the new Intel Core Processor family. For example, these processors are flexible enough to handle modern social networking sites, but smart enough to be able to adapt to a rapidly evolving Web that blurs the line between the online Web and your offline Desktop. Imagine the rich interactive Internet of tomorrow, where you can drag and drop to download and upload files at will. The technology in Intel's new 2010 Core Processors ensures that they will perform current tasks, and those that are right around the corner, with speed and efficiency.

Multiway processing. Intel's new 2010 Core Processors all feature a technology called Hyper-Threading, which effectively doubles the number of processes a core can run. The Intel Core i3 and Core i5 processors both feature Hyper-Threading, which lets them process up to four software threads simultaneously. The top-shelf Intel Core i7, on the other hand, is capable of 8-way processing for unparalleled computing performance, regardless of the application(s) you run. As you'd expect, Hyper-Threading is one of the smart features you'll find on Intel's new 2010 Core Processors, but that's not the whole story.

Turbo Boost. All software generally falls into one of two categories: single-threaded and multithreaded. As we've already mentioned, Intel created its Hyper-Threading technology to address the specific demands of multithreaded applications. Single-threaded applica-

tions, however, such as Apple's iTunes, rely on a single thread to get the job done, and as a result, there's little performance difference between a processor with or without Hyper-Threading. That's where Intel's Turbo Boost Technology

comes in. Turbo Boost can detect single-threaded applications and automatically increase the gigahertz of the processor to give those applications a significant burst of speed. Now that's smart. **FG**

The New 2010 Intel Core Processor Family

For the latest batch of processors, Intel's engineers made it their objective to design chips that are not only good at running a wide variety of processes, but also good at running them efficiently and concurrently, regardless of the shape and form of the code used to create a particular application. Read on to determine which of Intel's latest processors best meets your computing needs.



Good. Smart computing starts with Intel's Core i3 processor, which is designed to handle the modern demands of an increasingly high-definition world. All Intel Core i3 processors feature Hyper-Threading for 4-way processing, making it an excellent processor for multitasking and the computing demands of today and tomorrow. It's also the most affordable way to boost the brain power of your PC.

Better. A step up in performance and features brings you face-to-face with the Intel Core i5 processor, which features the same HD computing and 4-way processing capabilities as the Core i3, but with the addition of Intel's Turbo Boost Technology, which makes the Core i5 a powerful component for software of all shapes and sizes.

Best. The Intel Core i7 processor features the same HD computing and Turbo Boost capabilities of the Core i3 and Core i5 processors but multiplies the Hyper-Threading for unparalleled 8-way processing. This effectively doubles the number of software threads the Core i7 can handle compared to the Core i3 or Core i5. It's the ultimate in performance for the computer user looking for unbeatable performance.

Select The Intel Processor That's Best For You



Intel has developed a wide range of processors designed for various applications. Some processors are designed with "smart" features that enhance computing performance for those who want to get more out of their PCs. In effect, these smart technologies allow you to accomplish more tasks in a short amount of time. From basic and classic performance to the new smart family of processors, Intel has processors available in five performance levels to make it easy to pick the best match for your specific computing needs.

	Summary	Typical Uses & Users	Technology Notes
	Processors carrying the i7 brand offer the ultimate in smart performance; the combination of speed and smart performance features makes them the most powerful processors Intel produces for consumer PCs	HD-quality gaming and content creation; people who run demanding applications and need processors that can handle the widest range of computing-intensive tasks and situations	8-way processing, plus Intel Turbo Boost Technology that gives you additional speed when necessary and improves performance
	These make up the mid-range members of the three brands of the Core family of processors. i5 processors offer smart performance features with a speed boost	HD-quality computing; people who need processors that can handle a wide variety of computing tasks and situations	4-way processing, plus Intel Turbo Boost Technology that gives you additional speed when necessary and improves performance
	i3 processors give users access to smart performance features but are the lower-powered members of the Core family of processors	HD-quality computing; users who want smart performance technologies but at a lower price	4-way processing
	Pentium processors offer classic and reliable performance for users who require slightly more computing power than at the entry level	Everyday tasks; people who use applications that occasionally may be a little more demanding but still don't require intensive computing performance	2-way processing
	Celeron processors offer entry-level computing power and are a cost-effective option for people with tighter budgets	Basic tasks; people who use applications that don't require intensive computing performance	1-way processing*

*2-way versions available in some markets



Dell Studio s15z-2249CPN
Sony Vaio VPCS111FM/S
Toshiba Satellite E205-S1904
www.bestbuy.com/bluelabel

Blue Label 2.0 Notebooks

The Notebooks You Asked For



hen you spoke, Best Buy listened. The electronics retailer solicited feedback from notebook users of all stripes. You asked for laptops with long battery lives and cutting-edge features, and you wanted them at value prices.

Best Buy didn't just take your wish list straight to a manufacturer—it collaborated with *three* manufacturers to give you more choices.

The resultant Blue Label series (www.bestbuy.com/bluelabel) of notebooks is now available in version 2.0, and it features the Dell Studio s15z-2249CPN, Sony Vaio VPCS111FM/S, and Toshiba Satellite E205-S1904. New features on the menu are Intel Wireless Display technology, Windows 7 Home Premium, and Intel Core i5 processors. The laptops are just over an inch thin, and they can last five hours or longer on a charge. And with big names such as Toshiba, Sony, and Dell behind them, it's hard to believe that you can get all of this for as little as \$899.99.

The Lowdown On The Blues

- Blue Label 2.0 laptops are sold exclusively at Best Buy
- Intel's Wireless Display sends your laptop's personal media to your TV without a cable
- Each laptop includes a two-year manufacturer warranty, one-year antivirus subscription, and 30 days of Geek Squad support
- A battery life that lasts five hours or more

Free with any Blue Label 2.0 notebook is a Netgear Push2TV adapter designed to work with Intel's Wireless Display technology—also known as Intel's WiDi. All of the Blue Label 2.0 laptops feature Intel's WiDi, so you'll be able to wirelessly stream content from your laptop to your TV screen, such as digital photos, Internet video (such as Hulu and Netflix), and digital copies included with many movie discs. Business users may enjoy sending presentations to the big screen in the conference room without any cables. This

feature is expandable; if you want to share the broadcast with other TV screens, you can buy additional adapters. And with a 500GB hard drive and 4GB of RAM as standard features, a Blue Label 2.0 notebook will ensure you have enough storage space for all the media you want to share and operate without performance lag.

Each laptop comes with a unique exterior design and a bright, LED-backlit wide-screen display. Screen sizes vary from an ultraportable 13.3 inches to an eminently readable 15.6 inches. Speaking of portability, there's support for the best wireless networking standard, 802.11n. A Web cam and microphone let college students and business travelers talk to friendly faces back home.

Finally, each Blue Label 2.0 notebook comes with a two-year manufacturer warranty, as well as a one-year antivirus subscription and 30 days of Geek Squad support. In fact, the whole purpose behind this Best Buy product family is to address the issues that bother laptop owners the most. Isn't it nice to know that someone is listening? **EG**



The Blue Label 2.0 Breakdown



Toshiba Satellite E205-S1904

- Fusion Metallic Blue finish
- Inputs: 3 USB 2.0, Ethernet, and microphone
- Outputs: RGB (monitor), HDMI-CEC, and headphone
- 14-inch widescreen TruBrite LED display
- Compatible with 802.11a/g/n
- Microsoft Works 9, Microsoft Office Live Essentials, and Sonic Solutions Roxio Creator 2010 are included



Dell Studio s15z-2249CPN

- Premium Cappuccino finish
- 15.6-inch widescreen LED display
- Compatible with 802.11a/g/n
- Slot-loading DVD/CD drive
- 7-in-1 media card reader
- Integrated stereo audio speakers



Sony Vaio VPCS111FM/S

- Silver finish
- Inputs: 3 USB 2.0, iLINK, Ethernet, and microphone
- Outputs: VGA, HDMI, and headphone
- 13.3-inch LED display
- Compatible with 802.11a/b/g/n
- Sony Creativity Suite included

Shared Features

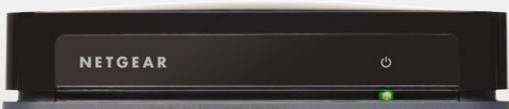
- Windows 7 Home Premium
- 2.2GHz Intel Core i5 processor
- 4GB memory
- 500GB hard drive space
- Double-layer DVD±RW/CD-RW
- Memory card reader
- Two-year manufacturer's warranty
- Free one-year antivirus subscription
- 30 days of Geek Squad support
- Microsoft Works 9
- Web cam

Each Blue Label 2.0 laptop comes equipped with Intel's new Core i5 processor, which features Intel's Turbo Boost Technology and 4-way processing capabilities.

To learn more about this high-performance component, see page 41.

From The PC To Your TV

Intel's Wireless Display technology, or WiDi, has the power to change the way you share personal photos and video. Until now, you had to crowd your family around your laptop screen to show them your home movie and photo collection, or you had to hunt for the right cable to hook up your notebook to your HDTV. Today, with Intel's WiDi, you can effortlessly stream your own personal content to your TV over a wireless connection. Simply link your TV to a Netgear Push2TV



PTV1000-10 adapter, which comes standard with any Blue

Label 2.0 notebook. The Push2TV adapter supports HDMI, so you'll always be assured of getting the best video connection possible. And that's it: You're ready to wirelessly display your personal media files on your TV, not to mention Internet video from hot sources such as Hulu and Netflix. With Intel's WiDi, you'll be able to enjoy unbound entertainment. ●



HOW TO BUY A Graphics Card Get The Complete Picture



enerating millions of microscopic pixels—each displaying one of 16.7 million colors—isn't an easy task. If you've noticed that your desktop PC is having trouble playing movies or running video games, chances are a new graphics card can resolve your video issues. Here, we'll tell you what you should look for when shopping for a graphics card.

Inputs & Outputs

Graphics cards typically offer a DVI or VGA input to match your monitor's input type. Additionally, card vendors generally include a few adapters, such as DVI-to-HDMI or S-Video-to-Component, to cover the connections that aren't included on the back of the graphics card. But if you want an easy way to connect your PC to your HDTV, look for a graphics card that includes an HDMI output (which can handle both HD video

and surround-sound audio), so you'll only need to run one cable between your computer and HDTV.

What's A PCI-Express?

Also known as PCI-E (Peripheral Component Interconnect-Express), nearly all new graphics cards feature a PCI-E x16 interface, which means that your PC will need a PCI-E x16 slot to use the card. If you have an older computer that only offers AGP or PCI slots, a limited selection of graphics cards is available.

Nvidia CUDA & ATI Steam

Nvidia and ATI are the only two graphics card developers in the world. Both companies have developed technologies—called CUDA and Steam, respectively—that will allow the number-crunching power of the graphics card to reduce the workload on your computer's processor. The catch is that your PC's applications must be designed to utilize these technologies; for example, some video- and photo-editing programs, such as Roxio's Creator 2010 (\$99.99; www.roxio.com), are already compatible. The computing performance gain is substantial, sometimes allowing your PC to run up to 10 times faster, so it's a wise decision to look for a graphics card that supports Nvidia's CUDA or ATI's Steam.

DirectX Compatibility

DirectX is a programming standard that graphics card vendors and software designers use to control how applications use a graphics card to display and render 3D video. DirectX 11 is the newest version, but most current graphics cards and video games only support DirectX 10. Game developers typically let you play games using an older DirectX standard, but you'll miss out on the new and improved features. If seeing the most realistic graphics is important to you, choose a card with DirectX 11 support. 

BY NATHAN LAKE

Graphics Card Nitty Gritty

- Graphics cards offer many type of outputs, but you should check to make sure the input on your monitor, such as DVI or VGA, is supported.
- You'll likely need a PCI-E x16 slot on your desktop PC's motherboard to install and use the latest graphics cards.
- Nvidia's CUDA and ATI's Steam technologies can revolutionize how quickly programs run on your computer.
- DirectX 11 is the future programming standard for computer games.

Your Future Office

The release of Microsoft Office 2010 is just around the corner, and you can take Office's new interface and features for a test drive by pointing your browser to www.microsoft.com/office/2010/en/default.aspx and downloading a free Office 2010 beta.

Tools For Success

Microsoft Office Home & Student 2007

Microsoft's Office Home and Student 2007 (\$149.95; www.microsoft.com) is an all-inclusive toolset that the whole family can use to create projects and complete daily tasks. The software suite comprises Word, PowerPoint, Excel, and OneNote. While Word handles word processing, PowerPoint offers presentation tools, Excel manages spreadsheets, and OneNote organizes note taking.

All For One, One For All

Faced with a variety of daily goals, each family member can use Office Home and Student 2007 to complete a multitude of projects. With Word, a student can write research papers, while Mom can compose a family newsletter to send to relatives. Both can use PowerPoint to create lively presentations with their projects, complete with photos, text, and music. Using Excel, a teen can log how many hours of driving practice she's earned, and Dad can track the family's spending budget. And everyone can use OneNote to type, draw, and share notes and ideas for school, work, and more.



Affordable Features

With so much to accomplish using Office Home and Student 2007, it's likely multiple family members will want

to use the software at the same time on their own computers. Fortunately for consumers, each copy of the software includes three licenses. This allows your family to share the suite and install it on the home office PC, your daughter's laptop, and your son's desktop. And by installing Office Home and Student 2007 on up to three systems, you'll spend as little as \$50 per PC to equip your entire household with Office.

Get the very affordable Office Home and Student 2007 and give your family members all the tools they need to accomplish their creative goals every day. **FC**

If You Need To Take Care Of Business

In lieu of Office Home and Student 2007's OneNote 2007, Microsoft's Office Small Business 2007 (\$449.95) offers two additional applications for the business-minded—Outlook 2007 and Publisher 2007.

With Outlook, small-business owners can email clients, schedule meetings, manage a calendar and daily tasks, and keep track of important contact information. Publisher 2007, meanwhile, provides tools to create marketing materials, such as a company newsletter, that can be distributed via print, Web, or email.



Good To Go

Microsoft Accessories That You Can Take With You

If you're ready to break free from your home office confines and work in any room of your house, then you need a pair of wireless peripherals that can go with you wherever you take your laptop or netbook. The Microsoft Arc Keyboard and Microsoft Wireless Mobile Mouse 4000 will give you the freedom to do so, meaning you can use them while helping your kids with their homework at the dining room table or when you need to look up a recipe online while standing at the kitchen counter.

Style For Every Room

The Microsoft Arc Keyboard (\$59.95; www.microsoft.com/hardware) has an elegant, curvy design that fits in with any room of your home. And because the Arc Keyboard is thin and weighs less than a pound, it's nearly effortless to carry it all the way from the second floor to the basement.

The design isn't just fashionable, but it's also functional. It features a domed keyset, which lets you type comfortably while you're catching up on email in your



Style, Function & Portability

- With portable accessories, you can work in any room of the house.
- The Arc Keyboard has a trendy and functional design, perfect for working comfortably while sitting on the couch or at the kitchen table.
- The Wireless Mobile Mouse 4000 offers BlueTrack Technology and is available in several trendy colors.

FirstGlimpse

favorite recliner or camped out at the kitchen table. You can also conveniently carry your snap-in Nano wireless transceiver in a special spot under the keyboard as you move from room to room.

With 2.4GHz wireless technology, you can use the Arc Keyboard as far as 15 feet away from your computer, and the signal is strong enough that it can even be used in rooms with lots of other wireless traffic, such as a media room.

The Traveling Mouse

The Microsoft Wireless Mobile Mouse 4000 (\$39.95; www.microsoft.com/hardware) is both practical and stylish. It's equipped with

Microsoft's unique BlueTrack technology, which works on virtually any surface (excluding clear glass or mirrored surfaces). So, your Wireless Mobile Mouse 4000 will work when you're using your netbook to shop online while stretched out on carpet or wood floors. And it comes in a variety of trendy colors (including sea blue and poppy red), so you can get one that matches your laptop bag or your netbook.

Like the Arc Keyboard, the Wireless Mobile Mouse 4000 uses 2.4GHz wireless technology that lets you use your mouse from as far as 15 feet away from your computer, even in rooms that are full of wireless traffic. And the included snap-in Nano transceiver can fit in the bottom of your mouse, or you can leave it plugged into your computer's USB port.

It doesn't matter whether you're a righty or a lefty, because the Wireless Mobile Mouse 4000 has an ambidextrous design. And thanks to its cross-hatched rubber side grips, you can comfortably use the Wireless Mobile Mouse 4000 for an extended period of time.

With the combination of the Arc Keyboard and Wireless Mobile Mouse 4000, you won't have to shut yourself in your home office anymore. The places you can work and play have no limits. **FG**

Hard Drive Speed

Spinning The Information



As you're looking at the specifications for a computer, internal hard drive, or external hard drive, one that is rather important is the rpm, or revolutions per minute.

This measurement indicates how quickly a hard drive can read or write data. The higher the number, the faster the hard drive. For example, a slower drive has 4,200rpm, whereas some of the fastest drives available operate at 10,000rpm.

Inside A Hard Drive

A hard drive uses round magnetic platters called disks to store all the data you save, such as files, folders, applications, and settings. Specifically, rpm refers to how fast those platters spin. When they spin faster, the head (the part inside the hard drive that "reads" the data on the platters) can access the data faster.

When you open a file or launch an application on your computer, a large part of how long it takes is how fast the hard



drive spins. Therefore, the benefits of a fast hard drive are readily apparent.

Shopping Tips

Common hard drive speeds you might come across are 4,200rpm, 5,400rpm, 7,200rpm, and 10,000rpm. Keep in mind that faster drives tend to be more expensive, although cost is also mitigated by how much storage capacity a drive has. For example, a 60GB drive rated at 7,200rpm may actually cost less than a 500GB drive rated at 5,400rpm.

When shopping for a computer or hard drive, keep in mind what you need the hard drive for. If you're looking for an external hard drive or a second internal hard drive with lots of backup storage for all your files, a slower drive (4,200rpm or 5,400rpm) with a large capacity—say, 500GB or more—is just fine.

However, if you're looking for a hard drive to boost your system's overall performance, opt for a drive with a smaller capacity that's clocked at 7,200rpm or 10,000rpm.

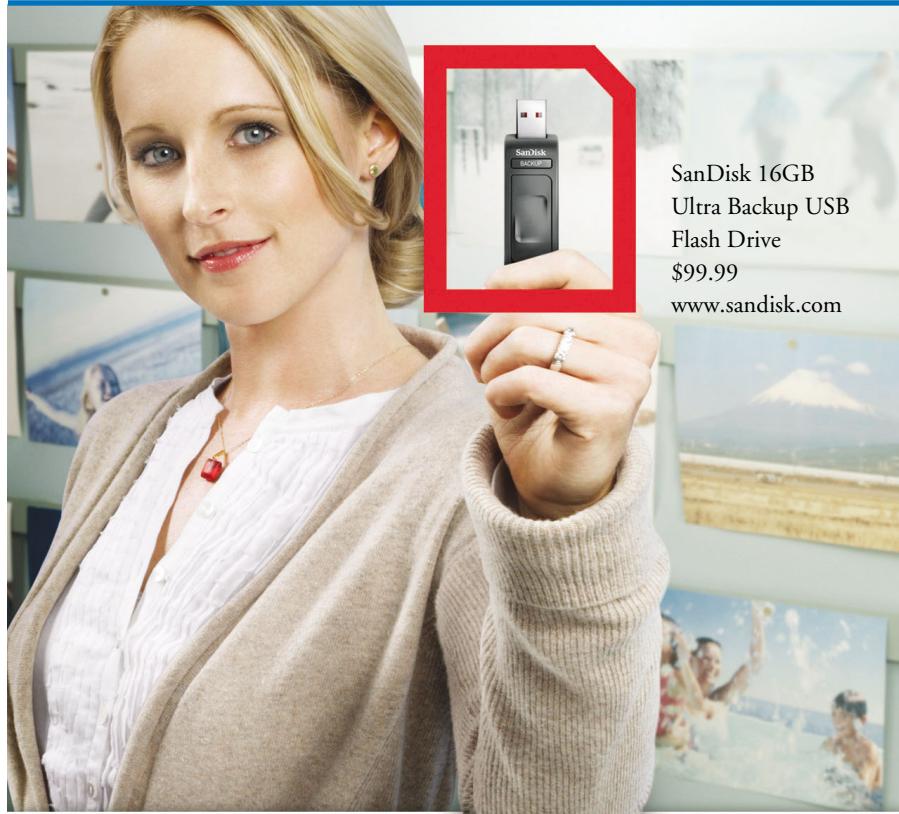
Solid-State Drives

Some hard drives won't have an rpm spec listed. That's because the hard drive is an SSD (solid-state drive) and has no moving parts. Instead of reading and writing data from spinning magnetic platters, SSDs use data stored in flash memory. Because they don't have moving parts that could wear out or break, they have fewer drive errors and might last longer. Most newer SSDs tend to be faster than a typical hard drive of any speed at most tasks, but, on average, they also cost quite a bit more. **FG**

BY SETH COLANER

In Summary:

- The rpm rating tells you how fast a hard drive reads and writes data.
- The slowest hard drives spin at 4,200rpm; the fastest spin at 10,000rpm.
- Slower hard drives are fine for storage, but faster hard drives give you better overall performance.
- SSDs are a fast and more durable alternative to traditional hard drives.



SanDisk 16GB
Ultra Backup USB
Flash Drive
\$99.99
www.sandisk.com

One Button That's Got Your Back SanDisk's Feature-Filled Flash Drive

With larger storage capacities than ever before, USB flash drives are a great way to back up your personal files, because you can carry them around on a keychain or in a pocket. SanDisk's 16GB Ultra Backup USB Flash Drive (\$99.99; www.sandisk.com) offers two features that

make archiving your data easier and more secure: one-touch button backup and automatic encryption.

Travel Security

Once you set up your password, security on the Ultra Backup USB Flash Drive takes care of itself. When the drive is unplugged from a PC, the flash drive's hardware encrypts the data, so

Superior Design

- Your data remains private, even if the Ultra Backup Flash Drive is lost or stolen.
- The backup button takes the effort out of backing up your personal data.
- You can configure the SanDisk Ultra Backup to copy only the files and folders you want it to.
- 16GB of storage space in a pocket-sized flash drive means you'll be able to travel with a large amount of your personal files.

you don't need to manually activate the protection. When you connect the flash drive to a PC again, you can access the data simply by entering your password.

The automatic protection feature is great for people who carry around sensitive data, such as yearly records for taxes. You won't need to worry about others recovering your data if the Ultra Backup is lost or stolen, and you can avoid emailing forms with sensitive information, such as a Social Security number or bank account, to your tax accountant across a potentially unsecure Internet connection.

Back Up With Ease

We all know that it's important to back up your digital files, but regularly doing so can be a time-consuming chore, especially when you're not sure whether the files are already stored on the flash drive. After you configure which files and folders the Ultra Backup USB Flash Drive should copy, all you'll need to do is plug it into a USB port and press the drive's Backup button. To speed up the process, SanDisk Backup lets you select a specific time period, such as two months or earlier (or a specific date), and then it'll only back up files that you haven't already stored on the flash drive.

Portability

With 16GB of storage, you'll no longer need a clunky external hard drive or extra cables when you want to travel with a significant portion of your personal files. For example, SanDisk estimates that the 16GB Ultra Backup USB Flash Drive can hold up to 11,400 photos (5MP images) or 7,600 songs (4 minutes per song, encoded at 128Kbps). The Ultra Backup also features a capless design, where the USB connector slides into the drive, which makes the drive more compact. **FG**

Essential

THINGS TO KNOW

USING YOUR PC WITH YOUR HOME THEATER



How can a computer enhance my home theater?

A You'll have access to your computer's videos, audio files, and photos in your living room. Web browsing and DVD/CD/BD (Blu-ray Disc) playback are additional bonuses.



What could my home theater offer my PC?

A In most cases, a TV provides a bigger screen than a computer monitor. Your home theater's sound system may also output better audio than your PC's speakers.



What are some of the ways I can link my computer to my home theater?

A You can connect the PC directly to your TV and audio system, or you can use a media extender or game console to access computer content across your network.



What's a media extender?

A This device connects to your TV and audio system to access media files stored on a PC or the Internet using a wired or wireless network.



What is an HTPC?

A A home-theater PC is a desktop computer with a wide, low case that resembles A/V equipment. It's made for use in a home theater rather than an office. An HTPC may have a remote and media player software that can be used from across a room.



How do I control an HTPC?

A It uses a compatible remote to navigate media player software. For Web browsing and PC maintenance, you may prefer to use a wireless keyboard with a trackpad.



Can a laptop work as a home-theater PC?

A In many cases, yes. A notebook capable of BD (Blu-ray Disc) playback is especially suitable. However, some models can't output BD movies or other high-def content to a TV.



What hardware requirements should an HTPC meet?

A It should support hardware acceleration of high-def video. It should also have quiet fans, a high-capacity hard drive, and combined audio/video output over HDMI.



How is a PC better than an Internet-enabled home-theater device?

A A computer can access more services, such as Hulu, Flickr, and Amazon Video-On-Demand, than set-top boxes, game consoles, BD players, and TVs with online service access can.



How should I route the computer's video output to the TV?

A Run an HDMI or DVI cable to the TV's video input. You may need to adjust the display settings to copy the PC's screen to the TV.



Computing Glossary



S

hopping for a computer can be intimidating, especially with all of the complex terminology. Here, we explain some common computer jargon.

Bluetooth—A short-range wireless standard that connects devices such as computers, printers, smartphones, and digital cameras so they can be used together without being physically connected with a cord.

broadband—Network connections that transmit high-speed Internet access that is faster than dial-up. Broadband speed varies depending on the provider. Cable companies deliver broadband via coaxial cable, whereas phone companies offer DSL (Digital Subscriber Line), which delivers broadband via telephone lines.

CRT (cathode-ray tube)—An old analog display technology for TVs and computer monitors. It features an electron gun illuminating phosphor dots that line the inside of a glass tube. When the phosphors are lit, they display on-screen images. CRTs consume a great deal of power and are heavy and bulky. Many CRTs support digital signals, though these degrade in quality when converted to analog.

dual-core processor—This integrated circuit, which controls the computer, features two processors, each with its

own cache, on a single die or chassis. In a dual-core configuration, the operating system has two processors to handle instructions, speeding up the computer and its ability to multitask.

Ethernet—A widely used LAN protocol in which a computer and a network are physically linked with a cord.

firewall—Hardware or software that limits access by a network or other outside source to your computer; it might also limit your computer's access to the network. The security measures are designed to protect your computer from outsiders who'd like to exploit it in some way. By the same token, firewalls may prevent infected files on your computer from accessing the larger network and spreading the problem to other users.

LAN (local-area network)—A group of computers that are physically connected by wires so they can communicate with one another and share information.

LCD (liquid-crystal display)—This technology sandwiches liquid crystals between thin sheets of glass. The crystals twist and untwist to allow and block light from a backlight, forming the images you see. LCDs are thinner, lighter, and consume less power than CRTs. Initially used mostly in notebook PCs, you'll now find LCD TVs and computer

monitors, and they are also in digital cameras, cell phones, and portable DVD players, among others.

office suite—Productivity software, such as Microsoft Office, StarOffice, and OpenOffice, that often includes word processing, spreadsheet, presentation, database, and financial tools.

operating system—The software, such as Windows XP, Windows Vista, Windows 7, or Mac OS X, that controls a computer and its peripherals and serves as the primary interface for the users.

processor—Also known as a microprocessor or the CPU, this integrated circuit controls the computer.

RAM (random-access memory)—A standard type of memory that is read from and written to by the CPU and hardware.

upgradeable—This term refers to the ability to add or swap out hardware to boost a computer's performance, increase its speed, or replace a defective or obsolete device or component. For instance, you may add more memory, replace an old CRT with a widescreen LCD, or swap out an older video card for a newer one that features an ATSC TV tuner so you can watch digital TV on your computer. Look for a computer with expansion slots or empty bays.

Which Notebook Computer Is Best For You?

A notebook computer is a pretty big purchase for most people, and it's usually a bit overwhelming, too. This chart compares the features and specs from several different types of notebook models.

	Operating system	Processor	Hard drive size; RAM	Screen size	Dimensions; Weight	Optical drives; Media card reader
What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	The diagonal measurement of the notebook's screen	Height x width x depth; How much the laptop weighs	Drives that can read and write discs; Slots that read media cards without a separate peripheral
	Acer AS5532-5535 MSRP: \$349.99* SKU 9555769	Windows 7 Home Premium	1.6GHz AMD Athlon	160GB; 3GB	15.6 inches	1.5x14.4x 10.8 inches; N/A
	Gateway EC1410U MSRP: \$399.99* SKU 9574757	Windows 7 Home Premium	1.3GHz Intel Celeron	250GB; 2GB	11.6 inches	0.8 to 1.1x 11.2x8 inches; 2.9 pounds
	HP Pavilion dv7-3065dx MSRP: \$729.99* SKU 9556296	Windows 7 Home Premium	2.4GHz AMD Turion II Ultra Dual-Core	500GB; 4GB	17.3 inches	1.37 to 1.7x16.2x 10.9 inches; 7.69 pounds
	Toshiba Satellite E205-S1904 MSRP: \$899* SKU 9701191	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	14 inches	1.22x13.7x 9.57 inches; 5.1 pounds
	Apple MacBook MSRP: \$999* SKU 9611541	Mac OS X 10.6 Snow Leopard	2.26GHz Intel Core 2 Duo	250GB; 2GB	13.3 inches	1.08x13x9.12 inches; 4.7 pounds
	Dell Studio s15z-2249CPN MSRP: \$999* SKU 9684515	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	15.6 inches	N/A
	Asus G60VX-RBBX05 MSRP: \$999.99* SKU 9556072	Windows 7 Home Premium	2.1GHz Intel Core 2 Duo	320GB; 4GB	16 inches	1.6x14.8x 10.4 inches; 7.2 pounds
	Sony VAIO VPCS111FM/S MSRP: \$1,049* SKU 9701289	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	13.3 inches	1.08 to 1.24x 12.95x9 inches; 4.4 pounds

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Netbook Is Best For You?

Netbooks don't offer the full capabilities that notebooks do, but these compact devices are ideal for those who need to stay connected while on the go. To find the netbook that fits your mobility needs, here's a comparison of the latest models.

		Operating system	Processor	Hard drive size; RAM	Graphics card	Memory card reader	Ports
What It Means		The software (usually Windows XP or Linux) that controls your PC	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Controls the quality of the video and images you see on-screen	Slots that can read media cards without a separate peripheral	Sockets that give your computer access to different peripherals
	Asus Eee PC 900HD MSRP: \$249.99* SKU 9447495	Windows XP Home	N/A	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC	3 USB; 1 Ethernet
	Gateway LT2023U MSRP: \$299.99* SKU 9568639	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	MSI U100-641US MSRP: \$329.99* SKU 9178775	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro	3 USB; 1 Ethernet; 1 VGA
	Asus MK90 MSRP: \$349.99* SKU 9441865	Windows XP Home	N/A	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB; 1 Ethernet; 1 VGA
	HP Mini 1036 NR PC MSRP: \$369.99* SKU 9446138	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC/MS/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	Compaq Mini 110c-1040DX MSRP: \$389.99* SKU 9376953	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/xD-Picture Card	3 USB; 1 Ethernet
	Toshiba NB205-N325PK MSRP: \$399.99* SKU 9575603	Windows 7 Starter Edition	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/SDHC/MMC	3 USB; 1 Ethernet
	Sony Vaio VPCW121AX/W MSRP: \$499.99* SKU 9568185	Windows 7 Starter Edition	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 950	MS Pro	2 USB; 1 Ethernet; 1 VGA

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Which All-In-One PC Is Right For You?

An all-in-one computer is compact, thanks to all its hardware being placed in the monitor. Some models offer a touchscreen interface that lets you access functions by selecting on-screen items with your finger, while others rely on a wireless mouse and keyboard. To see which all-in-one PC fits your needs, check out the chart below.

	Operating system	Processor	Hard drive size; RAM	Display; Optical drive	Ports	Graphics card
What It Means		The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Display size (measured diagonally); Disc drive included with the system	Sockets the computer has for accessing peripherals
	MSI WindTop AE1900-14SUS MSRP: \$399.99* SKU 9571395	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB 18.5 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, media card reader	Intel Graphics Media Accelerator 950
	Sony Vaio VGC-JS450F/S MSRP: \$999.99* SKU 9561592	Windows 7 Home Premium	2.7GHz Intel Pentium	500GB; 4GB 20.1 inches; Double-layer DVD±RW/BD/CD-RW	1 USB, 1 Ethernet, media card reader	Nvidia GeForce 9300M GS
	Apple iMac MSRP: \$1,699* SKU 9611587	Mac OS X v10.6 Snow Leopard	3.06GHz Intel Core 2 Duo	1TB; 4GB 27 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, 1 FireWire, 1 SD	ATI Radeon HD 4670
	Gateway ZX4800-02 MSRP: \$749.99* SKU 9527942	Windows 7 Home Premium	2.1GHz Intel Pentium	750GB; 4GB 20 inches; Double-layer DVD±RW/CD-RW	6 USB, 1 Ethernet, memory card reader	Intel Graphics Media Accelerator X4500HD
	Averatec D1005VH1E-1 MSRP: \$749.99* SKU 9514803	Windows Vista Home Premium	2.5GHz Intel Pentium	320GB; 3GB 22 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 DVI, 1 Ethernet, media card reader	Intel Graphics Media Accelerator X4500HD
	HP TouchSmart 300-1020 MSRP: \$899.99* SKU 9563171	Windows 7 Home Premium (64-bit)	2.7GHz AMD Athlon II	500GB; 4GB 20 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 Ethernet, media card reader	ATI Radeon HD 3200
	Sony Vaio VPC-L111FX/B MSRP: \$1,299.99* SKU 9560995	Windows 7 Home Premium (64-bit)	2.7GHz Intel Pentium	320GB; 4GB 24 inches; Double-layer DVD±RW/BD/CD-RW	5 USB, 1 Ethernet, 1 i.Link, media card reader	Nvidia GeForce G210M
	HP TouchSmart 600-1055 MSRP: \$1,599.99* SKU 9555821	Windows 7 Home Premium (64-bit)	2.13GHz Intel Core 2 Duo	750GB; 4GB 23 inches; Double-layer DVD±RW/BD/CD-RW	6 USB, 1 Ethernet, media card reader	Nvidia GeForce GT230M

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Software Listings

Get More Out Of Your PC

Computers can be used to create greeting cards, play games, balance your checkbook, and more. The thing is, most of these functions aren't available straight out of the box. To fully harness your computer's potential, you'll need to buy software. Here are some options.

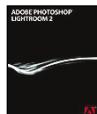
Art/Illustration/Graphics



Corel Digital Studio 2010
\$99.99*

www.corel.com

Perfect for organizing your digital media, this software suite includes the 2010 versions of PaintShop Photo Express, VideoStudio Express, DVD Factory, and WinDVD.



Adobe Photoshop Lightroom 2
\$299*

www.adobe.com

This photo management software from Adobe lets you quickly and easily import, process, manage, and showcase your images. It can integrate with Photoshop CS4.



Roxio Creator 2010
\$99.99*

www.roxio.com

Use Roxio Creator 2010 to easily capture, enhance, and save your photos, videos, and audio projects. Sharing is available via CD, DVD, your mobile phone, your iPod, or YouTube. It also includes video tutorials for advanced users and beginners.



Broderbund The Print Shop 23 Deluxe
\$49.99*

www.broderbund.com

No matter the project, you can use The Print Shop 23 Deluxe to easily create banners, business cards, letterhead, calendars, photo greeting cards, invitations, and more.

Audio/Video



Pinnacle Studio Ultimate Collection
\$129.99*

www.pinnaclesys.com

Pinnacle Studio Ultimate Collection comes with a full set of plug-ins and a Chroma-key green screen for advanced effects, editing, and production.



Roxio Toast 10 Titanium For Macs
\$99.99*

www.roxio.com

Use Toast 10 Titanium to burn audio tracks, video clips, and other data to disc. You can also convert files for playback on other devices.



Cakewalk Music Creator 5
\$34.99*

www.cakewalk.com

A user-friendly interface lets you bring your music to life and give it a professional sound. You can record, transcribe, and print your very own music.



Apple Final Cut Express 4
\$199.99*

www.apple.com

A drag-and-drop interface provides seamless movement between editing, trimming, and adding effects to your videos. The software is compatible with popular HD formats, including HDV and AVCHD.

Business Applications



Microsoft Office Home and Student 2007
\$149.95*

See p. 47

www.microsoft.com

The Home and Student version of Microsoft Office 2007 includes Word, PowerPoint, Excel, and OneNote, which meets the basic consumer's needs perfectly.



Adobe Acrobat 9 Standard (Upgrade)
\$99*

www.adobe.com

Upgrade to Adobe Acrobat 9 Standard to easily create, combine, and manage various PDF documents with improved features.



Intuit Quicken Home & Business 2010
\$99.99*

www.quicken.intuit.com

Features of the 2010 version of Quicken Home and Business include automatic bill reminders and a one-page view of your finances. Plus, it shows you where you're spending and where you can save.



TurboTax Business Federal + E-file 2009
\$99.95*

www.turbotax.intuit.com

Corporations, partnerships, and LLCs can complete a federal business income tax return, and a free e-file is included with purchase.

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Games/ Entertainment



2K Games Sid Meier's Civilization IV: The Complete Edition

\$39.99*

www.2kgames.com

Get the complete Civilization IV experience with the DRM-free version of classic Civilization IV plus three expansions.



Her Interactive Nancy Drew Dossier

\$19.99*

www.herinteractive.com
You, as Nancy Drew, go undercover on a movie set to investigate a Hollywood-style mystery. Uncover who is behind suspicious press leaks and production accidents with Nancy's sleuthing skills. Earning points during the game reveals an alternate ending.



Electronic Arts The Sims 3

\$49.95*

www.ea.com

Create your very own Sims. Customize their personalities, appearances, and homes and then send them out into the world to explore the neighborhood and meet new friends.



Lego Indiana Jones 2: The Adventure Continues

\$29.99*

www.lucasarts.com

Explore the locations from all four films and build your own levels and environments. And, all of your favorite characters are depicted in Lego form.

Home Productivity



Nuance Dragon NaturallySpeaking 10 Preferred

\$199.99*

www.nuance.com

Dictate emails, reports, and documents much faster than you can type by letting Dragon NaturallySpeaking do the typing for you. The software has an accuracy rate of up to 99%.

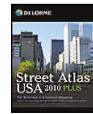


Apple MobileMe

\$99*

www.apple.com

MobileMe, Apple's Internet service, lets you keep your email, contacts, and calendar up-to-date across your iPhone, iPod touch, Mac, and PC. It also lets you store and share documents online via iDisk, and you can manage everything online through a suite of Web applications at www.me.com.



DeLorme Street Atlas USA 2010 Plus

\$39.95*

www.delorme.com

Street Atlas USA 2010 Plus is updated with new roads and road names, and it's now ready for use on any of your favorite devices, such as GPSes, netbooks, computers, and smartphones.



Susteen Data Pilot Backup & Sync Kit (LG)

\$24.99*

www.datapilot.com

Back up and sync your cell phone memory to your computer with a backup and sync kit. Kits for other phone manufacturers are also available.

Security/ Utilities



Kaspersky Lab Internet Security 2010

\$79.95*

www.kaspersky.com

The newest version of Kaspersky Internet Security 2010 includes protection from the latest viruses, spyware, and malware threats.



Kaspersky Lab Anti-Virus 2010

\$59.95*

www.kaspersky.com

Kaspersky Anti-Virus 2010 includes essential protection against Internet threats, such as viruses, spyware, Trojans, and more as well as phishing and identify theft defense.



Webroot AntiVirus With Spy Sweeper 2010

\$49.95*

www.webroot.com

Protect up to three computers from viruses and spyware. Spy Sweeper stops both known and potential threats by blocking suspicious activity and is compatible with Microsoft's Windows 7 operating system.



Trend Micro AntiVirus + AntiSpyware

\$39.95*

www.trendmicro.com

Automatic scans, updates, and outbreak alerts make it easy to safeguard data and files. Protects against viruses, worms, spyware, and Trojan horses, keeping your personal data safe.

Backup/ Recovery



Avanquest Fix-It Utilities 10 Professional

\$49.95*

www.avanquest.com

Fix-It Utilities 10 Professional can make your computer run like new. It performs more than 250 tests to see what is slowing your computer down and then fixes the problem, giving you better performance.



iolo System Mechanic

\$49.95*

www.iolo.com

With System Mechanic, you can find and fix errors and fragmentation on your PC, clean out clutter, and optimize your system for best performance.



Macware MacTuneUp

\$34.99*

www.macwareinc.com

This software offering cleans your Mac by providing automatic maintenance and boosting Internet speed. You can create a bootable backup with disk clones and also back up individual system folders.



iolo Search & Recover

\$39.95*

www.iolo.com

This software recovers accidentally deleted files, such as photos, MP3s, emails, videos, and documents, with one click. It can be used with numerous devices, drives (even if they're damaged), and email programs.

NOTEWORTHY

Accessories & Services

**KEYBOARD**

- An ergonomic design can cut down on the wrist strain associated with carpal tunnel syndrome
- Bluetooth connectivity lends itself to a tidy desk because there's one less wire to contend with
- A specialty model, such as a gaming or media keyboard, adds functionality to your pastime of choice

**EXTERNAL HARD DRIVE**

- Protect precious video and photo memories with backups
- Keep your computer running more efficiently by saving large files, such as your media collection, on an external drive

**USB HUB**

- Offers an affordable way to connect all of your peripherals, even if you have more gadgets than USB ports
- Adds the convenience of easy USB access—no more reaching behind your computer to plug in your USB devices

**MOUSE**

- A wireless mouse will cut down on cable clutter at your desk and also offers the convenience of portability for laptop use
- A gaming mouse can deliver better accuracy and speed for the ultimate in control
- Consider customizable buttons if you want to be able to access media, files, or programs with one-touch access

**CLEANING KIT**

- Specially designed cleaners will keep your LCD or plasma computer screen clean without running the risk of scratching its surface
- Cloths are often made of low-conductivity material in order to reduce static

**PRINTER**

- A quality photo printer will eliminate trips to the drugstore for 4x6 prints and give you the ability to instantly share your photo memories
- An all-in-one model is the perfect addition for any busy family that needs a device that can operate as a copier, scanner, fax, and printer

**SURGE PROTECTOR**

- Ensure the electrical current running to your desktop or laptop computer doesn't exceed proper levels
- Portable models will protect your laptop when you're on the go for work or play

**COMPUTING SERVICES**

To keep your desktop or laptop computer in tip-top shape, take advantage of the computing services offered at your local CE retailer. They can help you keep your machine running smoothly and free from the dangers that lurk online.

**WEB CAM**

- Bridge the gap between long-distance family and friends with online video chatting by adding a Web cam to your setup

- Computer Setup & Networking
- Virus & Spyware Removal
- Data Backup & Recovery
- Hardware & Software Upgrades
- Training & Consultation

Rocketfish RF-MAB2
Headphones
\$59.99
www.bestbuy.com



Rocketfish's Stereo Bluetooth Headphones

Enjoy Wireless Freedom

Headphones have enhanced our mobile audio lives beyond belief, allowing us to tune in to our favorite music while blocking out distractions. With the advent of portable digital music players and mobile phones with increasingly robust music-playing capabilities, headphones are our lifeline to libraries of music, podcasts, audio books, and more.

Cut The Cord

One caveat, however, is usually the fact that headphones tether us to those devices with a cable, which can be cumbersome at times. If a typical headphone user had a nickel for every time he accidentally snagged that headphone cable on something while jogging, working around the house, or grabbing his bag at the airport, he'd be a wealthy person.

The Rocketfish RF-MAB2's (\$59.99; www.bestbuy.com) Bluetooth capabilities solve the problem of messing with headphone cables. After a simple setup process, the RF-MAB2 will let

you listen to your music from virtually any Bluetooth-enabled digital music player, mobile phone, or other audio device, and because it employs the stereo A2DP Bluetooth profile, the headphones are compatible with a wide range of devices.

Ear Candy

- Wireless, Bluetooth capabilities
- High-quality audio
- Up to 14 hours of continuous use and 340 hours of standby time
- Comfortable behind-the-neck design and foam ear pads

What's even more convenient is that with these Bluetooth headphones, you have more options for where to stash your audio device. Instead of strapping it to your arm during yard work, you can simply drop it in your pocket for safekeeping.

Quality & Convenience

The RF-MAB2 delivers high-quality audio and features four audio settings to customize the listening experience, so if

you want to adjust what you're hearing for a particular track or in response to the noise environment, you're in luck. Plus, the behind-the-neck design of the RF-MAB2 ensures comfort around your head, and the foam ear pads are gentle on the ears, so you can listen all day long.

You can use the RF-MAB2 headphones for 14 hours straight without having to recharge, nearly long enough to keep you entertained for the duration of a nonstop transatlantic flight from New York to London—and back again. And because the headphones boast 340 hours of standby time, you can go days and days without using them and still find them charged and ready to go when you need them.

When they *do* need to be recharged, you can easily do so with the included USB charging cable, or, if you prefer, the AC adapter.

The RF-MAB2 offers high-quality audio with wireless Bluetooth headphones that free you to work or play in comfort and convenience. Enjoy them all day long, whether on the road or while keeping busy at home. **EG**



PORTABLE DEVICES

HOW TO BUY

Memory Cards For Mobile Devices

Carry Everything You Need

Most of your portable gadgets likely come with some built-in storage capacity but sometimes, it's not enough for your specific needs. You can supplement that original amount of storage with a flash memory card.

If your smartphone is your mobile office, you might stock a memory card with all the applications and files you need while on the road. Or, if your MP3 player is running low on capacity and you want to download and play the latest radio hits, you can add a card for extra storage space. You can also store maps and applications on a card to use with your GPS device, and even an archive of all your journeys. However you use it, these tips will help you get the best memory card for the job.

It's In The Cards

When choosing a card for your mobile device, you first need to know which type of card it can use. This may be labeled on the card slot and will certainly be addressed in the device's users manual.

Your Memory Card Checklist

- Know exactly which type of card your gadget uses.
- For media files, get more card capacity than you think you need.
- If compatibility allows it, consider getting a single card to use in multiple gadgets.
- Simple maintenance will give you the best card performance.

SD cards are currently the most common type, and in addition to the standard size, they come in two smaller versions—miniSD and microSD—as well as a high-capacity version, SDHC. Other card types include MMC (MultiMediaCard), Compact Flash, and proprietary cards such as Sony's Memory Stick. However, most portable devices these days use some form of SD card.

Flash memory is like hard drive space on your PC: It may fill up more quickly than you think, depending on how you're using it. If you're storing small items such as maps, documents, and a few mobile applications, you should be fine with a relatively low-capacity card—say, 1GB. But if you intend it for MP3 storage, that same 1GB will only hold about 250 songs of average length and good audio quality. So with space-hungry files, get more card capacity than you think you'll need,

Also, given the widespread use of SD cards, consider using a single card that you can shuttle between multiple gadgets. With an appropriate adapter, even a miniSD or microSD card will fit into a standard SD slot.

Play Your Cards Right

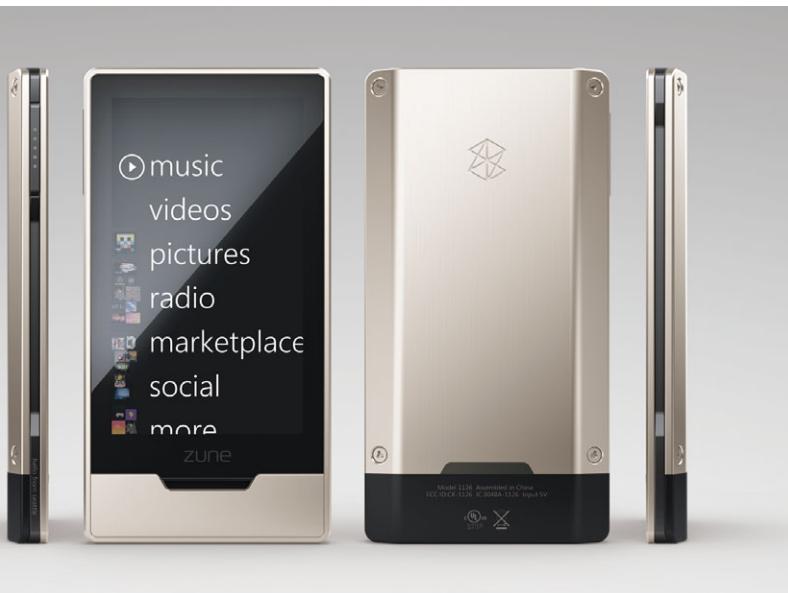
Part of buying wisely is not having to buy often. You can extend your card's life by treating it well.

Never remove a card while the device is powered on, as this could cause data corruption. Keep your battery charged, because data corruption may also occur if the device conks out while writing a file. And if you're constantly adding and deleting files, reformat the card regularly: This will let the card operate more efficiently. Following these simple rules will help maximize your card's life and usability. **FG**

BY BRIAN HODGE

Zune HD

Portable Perfection Personified



Sometimes, you can have your cake and eat it, too. Proof positive: Microsoft's Zune HD (www.zune.net). Aesthetically delicious, the Zune HD's features are every bit as tasty, including its HD Radio support; song tagging; wireless syncing, Internet browsing, and media purchases; and gameplay and video playback on what many consider the best portable media player screen available. Add in unlimited music downloads, online audio streams, Xbox 360 Live integration, video output in HD quality, and a thriving Zune Social community, and the player can satisfy any appetite.

Meet The New Boss

Available in 16GB (\$219.99) and 32GB (\$289.99) models, the Zune HD's shining physical trait is its stunningly clear and bright scratch-resistant, 3.3-inch, 16:9

widescreen glass OLED display (480 x 272). Framed in an Onyx Black (16GB) or anodized-aluminum (32GB) body just 0.3 inches thick and 2.6 ounces light, the display's multitouch interface makes navigating media a cinch, while the OLED foundation helps bolster battery life for 33 hours of audio or 8.5 hours of video (wireless features off).

Pass Into The Marketplace

Install the Zune software and you can step into the Zune Marketplace, an online store packed with millions of songs, HD and SD movies, TV shows, podcasts, movie trailers, free 3D games, and more for preview, rental, and purchase. With a Zune Pass subscription (\$14.99 per month), you can download as many songs from the Marketplace as you'd like (as long as the subscription is active), plus stream songs in their entirety from a Web browser, Zune software, or Zune HD (via Wi-Fi connection).

Zune HD Features

- Unlimited music downloads with a Zune Pass subscription, including 10 songs you get to keep each month
- HD-quality video output to HDTVs using the HD AV Dock
- HD Radio included for more FM stations with crystal-clear, CD-quality sound
- Xbox Live integration
- Wireless syncs and Internet browsing available with a Wi-Fi connection

Additionally, Zune Pass includes 10 song downloads each month you can keep.

HD Radio Delivered

Beyond dialing into traditional FM radio stations, Zune HD owners can tap in to thousands of others now broadcasting an HD Radio signal. In addition to CD-quality audio and displaying artist, song, and other information, HD Radio touts increased music, news, and sports programming without any fees required. (Go to www.hdradio.com to see U.S. stations broadcasting HD Radio channels.) The Zune HD also supports tagging songs for immediate purchase when a Wi-Fi connection is available or for later download upon syncing with the Zune software.

The Hits Keep Coming

Plug a Zune HD into an optional HD AV Dock (\$89.99) connected to an HDTV via HDMI or Composite cable, and you can output HD videos (up to 720p) on the HDTV's screen. And, Xbox 360 owners can stream PC-stored Zune media via a home network to a home-theater system. Further, you can watch the Zune movies and TV shows you buy on a PC, TV, and Zune HD, plus download them to a PC, Xbox 360, and Zune HD to watch from anywhere at no extra cost. Taken as a whole, the Zune experience offers possibilities other media players don't. **FG**

Downloads For Your Portable Lifestyle

Add Capabilities To Your Gadgets



We bet that you carry at least one portable gadget with you on a regular basis. To further enhance your portable device, you can download media content, firmware updates, and extra programs that add new features. In this article, we'll examine some of the most popular downloads for your portable gadgets.

For Music Lovers

It seems as though just about every on-the-go gadget, including portable gaming systems and GPSes, can play music these days. If you're looking for tunes to play on your device, there are a number of music download services that fill the bill. If you're looking for a gift for the music aficionado in your life, consider purchasing a prepaid music download card from a local CE retailer. These are available for a particular music download service, and recipients can redeem the card's value for the digital media they want by entering the card's code on the music download site.

GPS Enhancements

To find and plan your driving routes, GPS devices reference preloaded maps. If you've never updated your GPS' maps, you'll more than likely find the information your GPS is delivering is inaccurate due to road construction or moved businesses. Instead of dealing with a GPS that constantly recalculates its directions, you can purchase a map update. The update will download onto your PC, and once you connect your GPS to your computer via a cable, your GPS will upload the most up-to-date map information. If you're traveling outside the United States, you may need to purchase maps for the region you're traveling in. GPS manufacturers' Web sites may also let you download new services for your device, such as real-time traffic or weather forecasts.

Smartphone Downloads

With a keyboard, monitor, and an Internet connection (assuming you have a data plan), smartphones are capable of much more than making phone calls and checking emails. Almost every mobile operating system offers an "app store," where you can search through a catalog of applications and download programs to enhance the functionality of your smartphone. Whether you're looking for productivity applications, such as financial or word processing software, or a game to kill some time, you can find plenty of options that will suit your needs and help you get the most out of your phone. The app stores also offer a variety of ringtones, wallpapers, and other fun content. **FG**

BY NATHAN LAKE

Digital Audio Books

Need to relax on a hot summer day? A digital audio book format is ideal for people who don't want to carry around a bulky book. Most portable music players are compatible with a variety of audio book formats, so you can download your favorite title to listen to.

Car Electronics Overview

Trick It Out, Beef It Up, Keep It Safe

In our increasingly mobile society, we always seem to be going somewhere in our cars, moving from point A to point B to point C. You can spend this time in a more enjoyable and efficient way by adding or upgrading to the most appropriate car electronics for your lifestyle.

Car Stereos

A car stereo can be comprised of a few standard components or numerous high-end components, such as speaker systems, subwoofers, amps, and satellite radio. For the most part, though, you'll control your car stereo via an in-dash interface that lets you manage your CDs, MP3s, satellite radio, or even DVDs. For instance, the Pioneer DEH-P1300UB CD Receiver (\$150; www.pioneerelectronics.com) is fully featured with high-definition radio, satellite radio support, CD compatibility, a Bluetooth adapter, and an iPod-ready USB connection.

Speakers

To pump the sound of your favorite songs through your car while your windows are rolled down, you'll need a set of speakers that can produce premium song quality. Make sure you know how much wattage you'll require for the size and style of your vehicle. If you're considering an upgrade for your car's factory-installed speakers, look for a pair of standard-sized speakers, which provide

an accurate reproduction of the original sound through Ultra-Low Distortion and fluid playback.

In-Dash GPS

When you're shopping for an in-dash GPS receiver, you'll find that built-in audio and visual navigation is one of many features incorporated into high-quality in-dash systems. A GPS-ready car stereo has the ability to project an in-dash GPS' voice commands through your car speakers as you view map directions on the in-dash monitor. By purchasing an in-dash GPS, not only will you be taking advantage of your car's fullest capabilities, but you will also make your use of car electronics more efficient.

Car Video

An in-dash video system is far more than an LCD monitor with playback capabilities. Many in-dash video decks support satellite radio, built-in HD radio, DVDs, photo formats, and even touchscreens. A rear seat or headrest monitor with a widescreen would be a smart addition to your vehicle if you need to entertain your daughter and other young students as you drive your



weekly carpool route. When you hook your portable DVD player up to one of these peripheral monitors, your passengers can enjoy their favorite films while on the road.

Radar Detectors

Many radar detectors use laser technology to identify emergency vehicles in a 360-degree radius. Some radar detectors come with safety features that notify you of railroad crossings or road hazards on your route while you're traveling at night. Before buying a radar detector, make sure they are legal in your state.

Safety Extras

Protecting your vehicle is just as important as locking your home. By installing a two-way security system that includes sirens, LEDs, and a starter disabler, you can keep carjackers and thieves from victimizing your automobile. Also, rearview cameras give you a better view of what's behind you than mirrors can, and a remote start kit will make sure your car is ready to go with just a push of a button. **FC**

BY JOANNA SAFFORD

Car Installation Services

The car-audio professionals at your local CE retailer are trained to install a wide range of products in your vehicle. Installation is available for the following devices:

- Car decks
- In-dash GPS receivers
- Speakers
- Car amplifiers
- In-dash satellite radio

GPS Devices

They're Not All The Same

Printing out maps and turn-by-turn directions from the Internet is so yesterday. Stopping to ask someone for directions? Even more outdated.

With GPS devices, you don't have to do either. Instead, you can tap in to maps, download Web-based updates, and receive optional real-time traffic services to get where you need to go.

GPS devices differ as widely as the vehicles and drivers they guide. Generally, they fall into three categories—handheld, portable, and in-dash—and they offer different features and form factors. We'll explain each type and point you to the one that best suits your lifestyle and travel needs. **RG**

BY RACHEL DEROWITSCH

► Handheld

- Compact and lightweight
- Loaded with detailed maps
- Rugged hardware
- Easy to use and take with you

Handhelds are generally smaller, lighter, and less expensive than the other two types of GPS devices. Some are designed to help you track your exercise regimen and monitor your heart rate. A few even strap around your wrist, making physical activities, such as biking or jogging easier. Others double as PDAs.

Integrated Wi-Fi and Bluetooth capabilities enable you to easily download the most current maps and traffic information. On some models, if you input your destination, the device will figure out the most efficient way to go, guiding you with colored graphics and text and voice prompts.

Perfect For: Hikers, bikers, and drivers. Handheld devices are ideal for outdoor enthusiasts who also like to hit the road occasionally.

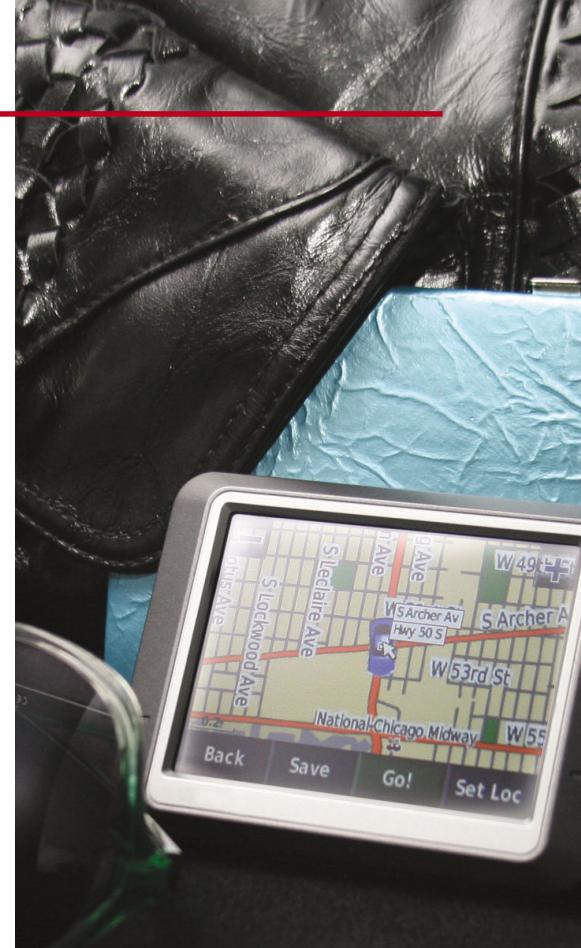
► Portable

- Car-mountable
- Easily moves from car to car
- Runs on vehicle and sometimes battery power
- Loaded with detailed maps

No matter where you need it, a portable GPS device will help get you to your destination. It's designed to run on a vehicle's power source, but if you want to take a spontaneous hiking trip, you can carry the battery-powered units with you, as well.

With larger touchscreens than handheld models, portable GPS devices can map out your directions in full color. Programmed points of interest, a trip calculator, antitheft system, and a rechargeable lithium-ion battery are other features to look for.

Perfect For: Trip-takers. Portable GPS devices are ideal for multicar families who want to switch the device among vehicles and possibly take it along on an outdoor excursion.



► In-Dash

- Large screen
- Multimedia functions
- Robust navigation features
- Pulls in strongest satellite signals

The maps and trip-calculating features of an in-dash GPS device are by far the most advanced of the three types. One thing to consider: You will probably need professional installation for an in-dash system.

These larger GPS devices come with more bells and whistles than smaller models. Some features to consider include Bluetooth compatibility, satellite radio, and integration with an MP3 player. With some in-dash models, you can also receive live weather and traffic updates.

Perfect For: Road warriors. Those who travel extensively and frequently visit new and unfamiliar places will definitely appreciate this device's large screen, powerful navigating capabilities, and entertainment options.

Essential

THINGS TO KNOW

DIGITAL RADIO

Q What is digital radio?

A Digital radio, such as HD, satellite, and Internet radio, doesn't use traditional analog signals from an antenna. HD radio uses digital signals, satellite radio uses satellite signals, and Internet radio uses a Web connection.

Q What are the benefits of HD Radio?

A You'll get CD-quality audio from local FM stations, FM-quality audio from local AM stations, and better reception without signal loss or distortion. You can also get text information about stations and content as well as extra broadcasts from your favorite stations.

Q What do I need in order to listen to HD Radio?

A You will need to purchase an HD Radio unit. These are available as in-dash stereo models for your car or boat and as portable or tabletop units for your home.

Q Do I need a subscription to HD Radio?

A No. Once you've purchased an HD Radio unit, you will be able to enjoy programming for free. In order to enjoy HD radio, however, it must be available in your area. To see available stations, visit www.hdradio.com.

Q What are the benefits of satellite radio?

A Satellite radio is commercial-free and offers better reception than terrestrial radio and no static. It also provides many more stations (commercial-free) giving you access to a greater variety of music genres and content.

Q What kind of device do I need to listen to satellite radio?

A You will need to purchase a satellite radio unit, such as in-dash stereo units for your car, tabletop units for your home, or portable handheld units.

Q Do I need a subscription for satellite radio?

A Yes, you do. You can purchase a variety of subscription packages through SIRIUS or XM radio or get a subscription to both satellite service providers.

Q What stations will I receive with satellite radio?

A You will have access to satellite radio stations that offer different genre- and decade-based music stations as well as content such as news, sports, and talk radio. Keep in mind that these aren't the same as your local radio stations, so you'll be able to access the same ones wherever you have satellite radio reception.

Q What are the benefits of Internet radio?

A You'll get all the benefits of other digital radio formats, including a wide variety of content and a static-free listening experience.

Q What do I need to listen to Internet radio?

A You will need an Internet radio device as well as a wireless connection to the Web or a PC to stream Internet radio content from. Tabletop and portable Internet radio players offer the ability to connect to Internet radio.





MP3 Player Glossary

W

ho doesn't want an MP3 player? It can help you relax, motivate you, and ensure you always have a song to match your mood. When you head to your local CE retailer to snag one, make sure you have this glossary so you can choose the perfect model.

AAC—Short for Advanced Audio Coding, this format is a competitor of the more common MP3 file format. It is the default format used by Apple.

Click Wheel—Apple's proprietary circular control on the front of the iPod.

Certified For Windows Vista—A Microsoft certification that ensures portable devices, such as MP3 players, and media, such as digital music and videos, are compatible with each other. This was once called PlaysForSure.

download—In terms of digital music, downloading is when you retrieve a song from an Internet site or another network connection and save it to your computer or digital music player. You can download songs from music Web sites such as iTunes, Napster, or Rhapsody.

DRM (digital rights management)—A security mechanism for digital media, associated with copyright. A common DRM scheme for digital music involves getting a license file to authorize playback of a free or purchased song.

earbuds—Small, circular devices you put into your ears so you can listen to

music on your player. These serve the same function as headphones. Many music players come with their own earbuds, but you can purchase a separate pair that are more comfortable or of better quality.

flash memory—Solid-state memory with no moving parts that is lightweight and small. In terms of digital music players, a flash-based player is lighter and smaller than a hard drive-based player, and it also won't skip. Thus, flash-based players are popular for use during exercise. However, the capacity of a flash-based player isn't as large as a hard drive-based player.

FM tuner—If your music player has a built-in FM tuner, you will be able to listen to music from local radio stations.

hard drive—Storage in which rigid platters are inside a fixed casing. In terms of digital music players, a hard drive-based player is larger and heavier than a flash-based player. Because of the moving parts (the platters), hard drive-based players are also prone to skipping. However, the capacities are much larger than those of flash-based players.

iTunes—An application that loads on-to your computer and lets you play, organize, download, and purchase music, videos, podcasts, and television shows for your portable media player or computer.

MP3—Perhaps the most popular digital audio encoding format. It compresses audio to about one-twelfth the original size while still providing excellent sound. In general, a 1MB MP3 file will last about one minute.

playlist—A queue of songs a user creates to play on a computer, burn to a CD, or transfer to an MP3 player. The playlist includes only directions to the location of the songs, not the songs themselves.

podcast—A downloadable episode that is similar to a radio program. A user can subscribe to a podcast for updated episodes, or she can download podcasts one at a time.

screen—The display on the front of a portable music player. A player's screen can either display in color or black and white.

WMA—Windows Media Audio is a digital audio format created by Microsoft.

widescreen—A screen with a 16:9 aspect ratio.

Which MP3 Player Is Best For You?

Pods are cool, sure, but you have other choices when it comes to listening to your tunes. This chart compares the most important—and coolest—features from select MP3 players.

	Memory type	Capacities	Songs	Video; FM tuner capabilities	Colors	Battery life	
What It Means	Hard drive (moving parts, more capacity) or flash (no moving parts)	How much memory the player has	Based on four-minute songs at 128Kbps, the number a player can hold	Some MP3 players can play video or let you listen to radio stations	Several players offer a variety of color choices	How long the battery will last when playing music	
	SanDisk Sansa Clip+ MSRP: \$39.99*; \$49.99* SKU 9448564	Flash	2GB; 4GB	500; 1,000	No; Yes	Black, red, blue	15 hours
	Apple iPod shuffle MSRP: \$59*; \$79* SKU 9229765	Flash	2GB; 4GB	500; 1,000 (AAC)	Neither	Black, silver, pink, green, blue	10 hours
	SanDisk Sansa Fuze MSRP: \$69.99*; \$79.99*; \$99.99* SKU 8753789	Flash	2GB; 4GB; 8GB	500; 1,000; 2,000	Both	Black, blue, red, silver	24 hours
	Sony E Series Walkman MSRP: \$79.95* SKU 9443792	Flash	8GB	N/A	Both	Black	30 hours
	Apple iPod nano MSRP: \$149*; \$179* SKU 9416376	Flash	8GB; 16GB	2,000; 4,000 (AAC)	Both	Pink, orange, green, blue, purple, black, silver	24 hours
	Samsung P3 MSRP: \$199.99*; \$299.99* SKU 9434882	Flash	16GB; 32GB	4,000; 8,000	Both	Black, silver	30 hours
	Apple iPod touch MSRP: \$199*; \$299*; \$399* SKU 8771732	Flash	8GB; 32GB; 64GB	1,750; 7,000; 14,000 (AAC)	Yes; No	Black	30 hours
	Microsoft Zune HD MSRP: \$219.99*; \$289.99* SKU 9449581	Flash	16GB; 32GB	4,000; 8,000	Both	Black, silver	33 hours

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which GPS Device Is Right For You?

One of the hottest CE devices around right now is a GPS, and what a useful device it is, too. Here, we compare some models available on today's market. All of these units come with maps already loaded, and you can purchase additional maps, as well.

	Screen size; Dimensions	Text-to-speech; Traffic receiver	Preloaded maps	WAAS	Bluetooth; MP3 playback	Included charging adapters
What It Means						
	The diagonal measurement of the screen; height x width x depth	Unit calls out specific street names; unit receives traffic updates and reroutes accordingly	The regional maps that come included with the GPS unit	A satellite and ground station system that gives exceptional GPS accuracy	Some units communicate wirelessly with other Bluetooth devices or play MP3s	AC adapters plug into the wall; DC adapters plug into your car's cigarette lighter
	TomTom 140-S MSRP: \$139.95* SKU 9263254	3.5 inches; 3x3.6x0.8 inches	Yes; Yes (with optional traffic receiver)	Entire U.S. (including Puerto Rico) and Canada	No	No; No
	Nextar 43LT MSRP: \$139.99* SKU 9301052	4.3 inches; 3x4.6x0.8 inches	Yes; Yes	Entire U.S.	No	No; Yes
	Garmin nüvi 1200 MSRP: \$169.99* SKU 9333045	3.5 inches; 2.9x3.7x0.6 inches	Yes; No	Entire U.S. (including Puerto Rico)	Yes	No; No
	Magellan SE4 MSRP: \$179.99* SKU 9556303	4.3 inches; 3.2x4.8x0.7 inches	Yes; Yes (with optional Traffic Link receiver)	Entire U.S. (including Puerto Rico)	Yes	No; No
	TomTom XXL 540-S MSRP: \$299.95* SKU 9555037	5 inches; 3.2x5.2x1 inches	Yes; Yes (with optional traffic receiver)	Entire U.S. (including Puerto Rico) and Canada	No	No; No
	Magellan RoadMate 1700 MSRP: \$299.99* SKU 9464153	7 inches; 4.2x7.5x0.6 inches	Yes; No	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No
	Insignia NS-CNV20 MSRP: \$349.99* SKU 8947312	4.3 inches; 3.2x4x0.9 inches	Yes; Yes	Entire U.S.	Yes	Yes; No
	Garmin nüvi 1450 MSRP: \$399.99* SKU 9670825	5 inches; 3.4x5.4x0.6 inches	Yes; No	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No

*Prices listed in this issue are for general reference and may vary from retailer pricing.



Personal Television

Stay In The Game Without Staying Home



FLO TV™ Personal Television

MSRP: \$249.99 (subscription required*)
SKU: 9548279
www.flotv.com

Quick Overview

With the FLO TV™ Personal Television and a subscription to the FLO TV™ service, you can watch shows you love from the channels you know. Channels like: ABC Mobile, CBS Mobile, COMEDY CENTRAL, Disney Channel, ESPN MobileTV, NBC 2Go, Nickelodeon, MTV, and more! Now, you can turn anytime into primetime. To see if the FLO TV™ service is available in your area, visit www.flotv.com/maps. For a limited time, purchase the FLO TV™ Personal Television for \$249.99 and receive 6 months of service included – almost a \$90 value*.

Perfect For

Modern consumers, families on the move, and anyone who wants to stay connected, entertained, and informed – without staying home.

Outstanding Benefits

- 3.5" touchscreen display is the perfect size for watchability/portability.
- A variety of live, simulcast, and time-shifted programming 24/7 from top networks
- Integrated stereo speakers and built-in adjustable stand are great for hands-free viewing.
- Designed with mobility in mind, everything is at the touch of a button or a simple finger swipe.
- On-screen Program Guide and one-touch channel changing make it easy to find and watch shows.
- Parental controls allow you to restrict specific shows or entire channels.

Coolest Feature

With a subscription to the FLO TV™ service, you have live sports, breaking news, hit shows, and family-friendly programming – all at the touch of a button or the swipe of a touchscreen.

*Taxes not included. Additional fees and charges may apply. Pricing and service subject to change at any time. Service must be activated between 11/1/09 and 3/31/10 and requires subscription. After six months' service, your credit card will be charged the then-current monthly rate, currently \$14.99; lower renewal rate may be available. Special offer expires 3/31/10. Please review the FLO TV Customer Contract and Privacy Statement for additional terms and conditions that apply to this purchase. All subscription payments are non-refundable. © 2010 FLO TV Incorporated, a Qualcomm Company. All rights reserved. FLO and FLO TV are trademarks of Qualcomm Incorporated. All other trademarks are the property of their respective owners. All programming subject to change and blackout restrictions. Service not available everywhere. Image on screen is generic and not representative of the FLO TV service.

NOTEWORTHY

Accessories & Services

**GPS CHARGERS**

- Make sure your travel companion always has a full battery
- If you do run out of battery, charge your GPS with an adapter; these can plug into a wall, PC, or car's DC outlet

**MP3 PLAYER CASES**

- Protect your MP3 player from bumps and scratches
- Quickly access your player's functions with a clip
- Keep your player out of your way with an armband

**GPS MOUNTS**

- Mounts can be placed on a car dash or stuck to a windshield to be within reach

**MP3 PLAYER EARPHONES**

- Match earphones to your needs: If you don't want anything bulky, opt for earbuds that fit inside your ear; to hear every musical detail, try headphones that cover the ear completely
- Listen to your music without the interference of background noise with earphones that offer a noise-canceling feature

**CELL PHONE CHARGERS & BATTERIES**

- Keep your phone charged no matter where you are; adapters for your cell phone let you use solar power, your car's DC outlet, wall power, or your computer to charge your phone
- Be prepared for emergencies with extra cell phone batteries

**MP3 PLAYER DOCKS & SPEAKERS**

- Portable speakers let you play music for a group; some include radios and can also play CDs
- Recharge your player's battery with a portable dock as you continue listening to music
- Play your music through car speakers using an FM transmitter

**CELL PHONE HEADSETS**

- Keep your hands free while still being able to use your phone
- Link compatible cell phones to a Bluetooth headset to make or take calls without a tangled mess of cables
- Use a headset that offers noise-canceling capabilities to ensure you don't miss any of your conversation

**CELL PHONE CASES**

- Safeguard your phone from wear and tear with a case
- Universal cases fit most sizes of cell phones; some of these will include clips and wrist straps for portability and accessibility
- Fitted cases specifically fit your phone's model type; these can be hard acrylic casings, rubber sleeves, or leather pouches
- Avoid getting scratches and fingerprints on your phone's screen with stick-on or hard, clear screen protectors

**MOBILE SERVICES**

Whether your wireless device is brand-new or nearing the end of its life span, your local CE retailer offers services to help you take care of all of your wireless device's needs.

- Protection plans for GPSes, MP3 players, and cell phones
- Phone and battery recycling
- GPS setup and deck installation
- MP3 vehicle integration
- MP3 player setup and training
- Cell phone repair services and loaner phones

Shopping Tips

- Wireless cameras are easier to install.
- Use motion sensors to trigger recording.
- Remote management features let you control the system and view video from anywhere using a Web browser.
- Kits come with everything you need to get started.

HOW TO BUY A Home Security System

Security & Convenience Are No Longer Mutually Exclusive

Putting cameras inside and outside your house is useful for much more than just security. They let you keep tabs on kids in the pool while you're inside, see if there are packages left by the front door, or check to see if you accidentally left a garage door open. Depending on the technology you opt for, they are also useful for remote viewing, so you can see if the kids are having a party when you're on vacation or keep an eye on a nanny while you're at work. Here's what to look for when shopping for a home security system.

Comparing Cameras

Most of the technology for a home security system is found in the cameras. Features to look for include infrared sensors (also called night vision), color instead of black and white, and wireless connections instead of wired. That last feature is especially nice, as it makes it easier to add more cameras without budgeting for extra wiring, saving a lot of money and hassle if you want to change camera placement, such as if you convert a guest room into a nursery. Also look for motion sensors that can turn cameras on only when movement is detected.



Computer vs. DVR

Security cameras are worthless unless you can record the footage they provide, and security systems handle this in one of two ways. Some connect to a computer to store video on a hard drive, while others come with their own DVRs, which let you record even when a computer isn't turned on. When buying a system with its own DVR, check to see if it comes with a display. Otherwise, you'll need to budget for that separately.

Remote Management

Some security systems require you to be home to see what they've recorded, but there are systems that allow for remote

monitoring from a Web browser or your cell phone. This is a great feature when you want to check in from work or while you are on vacation to see if anything suspicious is going on.

Consider A Kit

The easiest way to get a home security system up and running is to purchase a kit that comes with multiple cameras, a base station, remotes, and everything else you need in a single box. Look for systems that are expandable so they can grow with your needs, because once you see how useful a home security setup is, you'll want to put cameras all over the place. **FG**

BY TRACY BAKER

Essential

THINGS TO KNOW

WEATHER STATIONS

Q What kind of information does a weather station typically display?

A Nearly all weather stations list both indoor and outdoor temperatures as well as the time. Many models also feature a three- or four-day weather forecast with condition icons, such as the sun or clouds with rain, and the day's expected high temperature.

Q Can a weather station also measure humidity, heat index, wind, and other climate conditions?

A Yes, if a weather station supports the use of thermo-hygro sensors to receive dew point, atmospheric, or barometric readings, it will display additional condition information.

Q How does a weather station know what the temperature is?

A To detect the current outdoor temperature, most weather stations use a wireless sensor that you place outside to receive temperature information. These sensors have a range up to 330 feet. An additional sensor on the weather station will determine the current indoor temperature.

Q Why is the transmission range of the weather station's wireless sensor important?

A If the range of the wireless sensor is too short, you may be limited to placing the sensor in areas that don't reflect the true air temperature, such as near pavement or in a regularly sunny area.

Q What's the benefit of an Internet-connected weather station?

A By connecting to the Internet, a weather station can receive detailed forecasts from the National Weather

Service or other professional organizations. At a glance, this will let you see how weather conditions will change throughout the day and access forecasts for other cities.

Q What's the benefit of a weather station that can show forecasts for more than one location?

A This feature will let you see weather information for cities where your friends and family are without going online or watching TV. If you regularly travel or work in other parts of the country, this is a convenient way to keep abreast of the weather.

Q Can a weather station help me prepare for the conditions at a specific venue, such as a golf course?

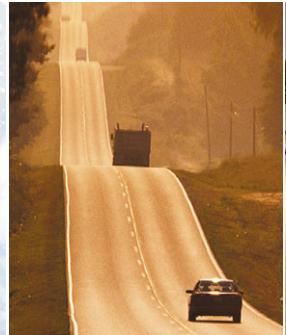
A Yes, some Internet-connected models feature weather information for points of interest, such as sports venues, parks, and golf courses, to help you plan your day. Typically, a weather station will break down the forecast into different times throughout the day and list the sunrise and sunset time.

Q Will a weather station alert me of impending severe weather?

A Some Internet-connected models are capable of alerting you to severe weather warnings issued for your city or ZIP code.

Q Are weather stations capable of audibly delivering the forecast?

A Internet-connected weather stations that include built-in speakers can read weather, news, entertainment, and sports information, and they can also be programmed with custom audio greetings.



Gaming System Memory

Today's Consoles Store Far More Than Game Saves

In the past, it was simple. Buy a video-game console, grab some games, and you had a dedicated gaming box for the living room. Today's consoles do so much more than play video games, however, so storage memory is a real concern. You need space to store downloadable games, movies, and TV shows; space to store your music and photos; and space to store custom gamer profiles for everyone in the house. When comparing consoles and shopping for additional storage, it's important to understand the differences between internal and external storage.

Internal Storage

Most of the latest video-game consoles have some form of internal storage, ranging from relatively low-capacity solid-state memory chips to the same types of high-capacity hard drives found in home computers. These are useful for storing music, pictures, downloaded movies, and other multimedia locally on the machine, along with downloaded add-on content for games you own. If you want to store a lot of files on your actual console, be sure to look for one with a larger capacity.



Some game consoles let you watch DVDs or Blu-ray Discs via the console's optical drive without consuming any storage space. However, if you plan to use advanced Blu-ray Disc features, such as BD-Live, content is downloaded to your console and consumes varying amounts of space depending on what is downloaded. You can also download entire movies—even in high definition—and delete them when you are finished watching them, freeing up space for future rentals.

External Storage

If you want to be able to transfer your data from one place to another, video-game consoles also accept external memory cards. These have a lower storage capacity than your console's internal memory but offer much more in terms of mobility. For example, you can use a memory card to store gamer profiles that can be used on a different console so you can take all of your settings and save games with you when you're on the road and not lose any progress.

Cover Your Bases

You can never have too much storage, so be sure to use a mix of internal and external storage for your consoles. That way, you can get the most out of multi-media features in your living room and can also use the external storage when you visit other people's living rooms. It's the best of both gaming worlds. **FG**

BY TRACY BAKER

Minding The Bytes

The amount of data a console or external memory card can store is printed on the packaging and listed in MB (megabytes) or GB (gigabytes), with larger numbers always being better. It takes 1,000MB to equal 1GB, and some consoles store hundreds of gigabytes of data out of the box—but how does that translate into real-world terms?

Games and movies. DVD-quality movies consume a few gigabytes per movie, and high-definition movies require several gigabytes of storage. Games and add-ons for disc-based games require anywhere from a few dozen MB to more than 1GB.

Gamer profiles. These generally take up only a few megabytes of space unless you have a lot of games that everyone plays, in which case multiple saved games can take up more room than usual.

MP3s. A typical high-quality, three-minute track requires 3 to 5MB of storage.

Digital photos. Storage requirements vary wildly depending on the specifications of your camera and the photo settings you use, but you can right-click any picture you have saved on your computer, click Properties, and look at the file size to get an approximation of how many of them you can store per gigabyte.

Home Music Recording Equipment

Everything You Need To Make A Masterpiece



You can set up a recording studio in your own home with just a few crucial components.

The first item you need for home recording, believe it or not, is a computer. The computer will receive the digital audio data from the microphone and recording interface; use software to process the audio; and store the data for future audio use, modification, or mixing. You don't need a special or super-fast computer, though. Even a computer with about a 2GHz processor and 1GB or more of RAM will be enough. However, if you begin working with intensive applications, such as virtual instruments (synthesizer-like instruments that come in software form and run from your computer instead of a standalone keyboard), you'll likely need to up the computer firepower.

Although you can plug an instrument with a 1/4-inch jack, such as an electric guitar, directly into an audio interface, you're going to need a microphone to capture the sound of vocals or other instruments, such as a trumpet or cello. Don't forget the microphone cable to connect it to the audio interface or the microphone stand to hold it for you.

Next, you'll need an audio interface. This is the device that connects to the computer and receives a signal from the microphone. There are generally two types of interfaces available: USB



and FireWire. Make sure your computer has the appropriate USB 2.0 or FireWire ports, depending on the interface you buy.

Although you can use your audio software to mix your recordings on your PC, having a mixing board is generally preferable because the physical knobs and faders are much easier to use on the fly. The mixing board resides between the audio interface and the computer, so again, be sure that you have the necessary USB or FireWire ports to hook this up to your computer.

You'll need a way to listen to the playback of your recordings, so look for a

pair of studio monitors and headphones. The headphones are necessary for you to simultaneously listen to a click track to keep time or what you've already recorded while you perform additional tracks.

Recording software is crucial to the process, as well, as this is the environment wherein you'll be able to organize, edit, and export your completed tracks.

And, of course, the final and most important ingredient to a recording studio is you, with musical talent and a little inspiration. FG

BY SETH COLANER

Standalone Music Recorders

Using a computer and audio interface combination isn't the only way you can record high-quality sound; there are many standalone music recorders available, as well. Consider a digital 4- or 8-track recorder, which allows you to record and mix multiple audio tracks and add some audio effects (such as reverb or a phaser effect) on a single device. Then, you can export the project (or individual files) to a computer or, in some cases, burn them directly to a CD.

Other music recorders are compact, so you can take them with you wherever you go and record your masterpieces as they come to you, and many of them still let you create multitrack recordings and add effects. ●

ESRB Game Ratings & Descriptions

Find Material That's Appropriate For Your Kids

ESRB (Entertainment Software Rating Board) Ratings

In order for parents to select gaming software appropriate for their children, ESRB ratings (www.esrb.org) are listed on the front and back of most game packages to provide concise and impartial details about a title's content.



Early Childhood. Titles with this rating have content that may be suitable for children ages three and older. These software titles contain no material that parents would find inappropriate.



Everyone. Titles with this rating have content that may be suitable for children ages six and older. Games in this category may contain minimal cartoon, fantasy, or mild violence and infrequent use of mild language.



Everyone 10+. Titles with this rating have content that may be suitable for children ages 10 and older. Games in this category may contain more cartoon, fantasy, or mild violence and language as well as minimal suggestive themes.



Teen. Titles with this rating have content that may be suitable for children ages 13 and older. Titles in this category may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling, or infrequent use of strong language.



Mature. Titles with this rating have content that may be suitable for persons ages 17 and older. Games in this category may contain intense violence, blood and gore, sexual content, or strong language.



Adults Only. Titles with this rating have content that should only be played by persons 18 years and older. Games in this category may include prolonged scenes of intense violence, graphic sexual content, or nudity.

For additional information, ESRB ratings on the back of game packages include content descriptions and depictions.



Gaming Tips

For Parents

Aside from checking ESRB ratings, there are other ways you can ensure that the games your youngsters are playing are age-appropriate.

- Carefully look at everything on a title's packaging, including the game graphics.
- Find game reviews, screenshots, or demos to get a better idea of a game's content.
- If available, use game parental controls to restrict mature and inappropriate content.
- Learn about games by talking to other parents and older children who are familiar with or have played certain titles.
- Participate in your children's gaming and discuss their games as much as possible.
- Be aware of nonrated ESRB material a game may contain. "Mods" are program downloads that can alter a game's content, and online games often have live player chats as well as other user-generated content.

Which Gaming System Is Best For You?

Game consoles and portable devices are no longer limited to gameplay. They can also access the Internet, download media, and play your favorite DVDs or CDs. To help you find a gaming device that will suit you well, here's a comparison of the most popular selections you can find at your local CE retailer.

		Hard drive size	Compatible memory cards	Optical drive	Video resolution output	Ports
	What It Means	How much data the system can hold	Cards that will let you save and off-load data, such as game saves or personal media	Aside from game discs, other playable media formats	Highest number of video pixels that are sent to a TV or portable console screen	Hookups for controllers as well as video and audio outputs
Console Devices	 Sony PlayStation 3 Slim (120GB) MSRP: \$299.99* SKU 9476952	120GB 2.5-inch Serial ATA	PlayStation and PlayStation 2 cards with USB memory card adapter (not included)	CD-RW/DVD-RW/BD-RW	1,920 x 1,080	1 Ethernet, 1 A/V, 1 Optical digital audio, 2 USB, 1 HDMI
	 Nintendo Wii MSRP: \$199.99* SKU 8008559	512MB	SD/Nintendo GameCube Memory Card	Can only play game titles	720 x 480	4 controller, 1 Component, 1 Composite, 1 S-Video, 2 USB
	 Microsoft Xbox 360 Arcade MSRP: \$199.99* SKU 9267937	256MB	Xbox 360 Memory Unit	CD-RW, DVD-RW, among others	1,920 x 1,080	1 A/V, 3 USB, 1 Ethernet, 2 memory
Portable Devices	 Nintendo DSi MSRP: \$169.99* SKU 9249725 (blue)	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
	 Nintendo DS Lite MSRP: \$129.99* SKU 8566312	None	None	None	Dual 256 x 192	1 headphone, 1 microphone
	 Sony PlayStation PSP go MSRP: \$249.99* SKU 9459659	16GB flash memory	Memory Stick Micro	None; download to internal and removable memory only	480 x 272	1 USB, 1 headphone
	 Sony PlayStation Portable 3000 MSRP: \$169.99* SKU 9175082	64MB	Memory Stick Duo/Memory Stick Pro Duo	UMD (Universal Media Disc)	480 x 272	1 video out/headset, 1 USB, 1 DC out

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Online community	Wi-Fi access; Media streaming	Parental controls	Compatible game formats	Included accessories & services	Available accessories	Controllers	Perfect for
Web site membership for downloads, upgrades, and more	Access the Internet without a cable hookup; Send and receive media wirelessly	Help parents decide what content their kids can or cannot access	Game titles that can be played on the game system	Accessories included with the console	Extras that can help enhance your gameplay	Included controllers; wired/wireless controller compatibility	Who can benefit from the special features the gaming system offers
Yes, free PlayStation Network membership	Yes, 802.11b/g; Yes	Included; Options available for PS3 games on PS Network, BDs, DVDs, and Internet	Sony PlayStation 3 titles and select PlayStation titles	DualShock 3 wireless controller, USB cable, PlayStation Network membership	Blu-ray remote, Bluetooth headset, memory card adapter, wireless keypad	Includes 1 DualShock 3 wireless controller; wireless	Someone who wants the value of a full gaming system with a BD player and media streaming
Yes, various paid and free Wii Channels are available	Yes, 802.11b/g; Yes	Included; Options available for Wii titles, online features and downloads, and more	Nintendo GameCube and Wii titles	Wii remote and nunchuck, sensor bar, Wii Sports, console stand, A/V cable, adapter	Wireless Wii remote, wheel, classic (wired) controllers, wireless sensor bar	Includes 1 wireless Wii remote and nunchuck; Both (some titles require a wired remote)	Gamers of any age who want a unique wireless gaming experience that requires little gaming knowledge
Includes free Silver membership to Xbox Live	Yes, 802.11a/b/g; Yes	Included	All Xbox 360 games	Wireless controller, standard-definition A/V cable	Headset, network cable, HDMI cable, Xbox 360 hard drive, universal media remote	Includes 1 wireless controller; wireless	People looking for a console that can play games and also stream digital media from MP3 players and computers
DSiWare (DSi online store)	Yes; Yes	Included; Available for Nintendo DSi content	Nintendo DSi and Nintendo DS titles	AC adapter, 2 styli	Audio headset, battery power pack, screen protectors, carrying cases, styli	N/A	Users who want a handheld gaming system that lets them take, personalize, and share photos
Yes, free Nintendo Wi-Fi connection	Yes, 802.11b; No	Not included	Nintendo DS and Game Boy Advance titles	AC adapter, cartridge slot cover, stylus	Cases, AC adapter, headphones with microphone, styli, cartridge case	N/A	Anyone who will appreciate dual touchscreens and voice-controlled gaming
Yes, PlayStation Network	Yes, 802.11b; Yes	Included	Available via downloads from PlayStation store	AC adapter, USB cable, Media Go software, Rock Band Unplugged Lite voucher	Protective screen film, cradle, headphones, memory cards, cases	N/A	Those who need a bigger screen for their gaming, Internet, and media entertainment
Yes, free PlayStation Network membership	Yes, 802.11b; No	Included; Options available for UMDs, Internet, and video downloads	PlayStation Portable titles	AC adapter, AC power cord, battery pack, video rental through PlayStation Network	Battery charger, travel case, memory cards, A/V cable, AC adapter, car adapter	N/A	Those who want to enjoy gaming as well as movies, photos, and music when they're on the go



Amelia

Rating: PG • Format: Blu-ray Disc

RELEASE DATE:
2/2/2010MSRP: \$29.99*
SKU: 9730157

Zombieland

Rating: R • Format: Blu-ray Disc

RELEASE DATE:
2/2/2010MSRP: \$29.99*
SKU: 9710975

Couples Retreat

Rating: PG-13 • Format: Blu-ray Disc

RELEASE DATE:
2/9/2010MSRP: \$36.98*
SKU: 9700805

This Month's Blu-ray Disc Releases

■ February 2 to 8

- “Amelia” • \$29.99* • SKU: 9730157
- “Bonnie & Clyde” • \$28.99* • SKU: 18297524
- “Doctor Who: The Complete Series” • \$59.99* • SKU: 18332316
- “Doctor Who: The Waters Of Mars” • \$19.98* • SKU: 18331501
- “Fear & Loathing In Las Vegas” • \$24.99* • SKU: 9700823
- “Gangs Of New York” • \$29.99* • SKU: 9679844
- “He Was A Quiet Man” • \$17.98* • SKU: 18321161
- “Law Abiding Citizen” • \$39.98* • SKU: 9694542
- “Love Happens” • \$29.99* • SKU: 9698062
- “Maid In Manhattan” • \$19.99* • SKU: 9711073
- “Mona Lisa Smile” • \$19.99* • SKU: 9711082
- “Mystic River” • \$24.99* • SKU: 9694994
- “New York, I Love You” • \$27.99* • SKU: 9724226
- “Planet Hulk” • \$24.99* • SKU: 9694579
- “The Fallen Ones” • \$17.98* • SKU: 18317538
- “The Godfather” • \$29.99* • SKU: 9669186
- “The Godfather Part II” • \$29.99* • SKU: 9669168
- “The Girl Next Door” • \$17.98* • SKU: 18317547
- “The Last King Of Scotland” • \$24.99* • SKU: 9730166
- “The Man From Earth” • \$17.98* • SKU: 18321161
- “The Music Man” • \$24.99* • SKU: 9694912

“To Live And Die In L.A.” • \$24.99* • SKU: 17767908

“Universal Soldier: Regeneration” • \$24.99* • SKU: 9710866

“Walk The Line” • \$24.99* • SKU: 9730175

“Zombieland” • \$29.99* • SKU: 9710975

■ February 9 to 15

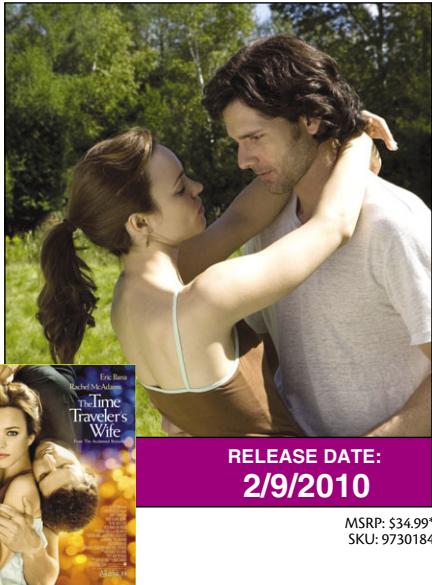
- “A Serious Man” • \$29.99* • SKU: 9724217
- “Couples Retreat” • \$36.98 • SKU: 9700805
- “Dare” • \$35.98* • SKU: 18325528
- “Drop Zone” • \$17.99* • SKU: 9731086
- “Edge Of The Earth” • \$12.98* • SKU: 18385604
- “Hard Rain” • \$17.99* • SKU: 9731068
- “I Hate Valentine’s Day” • \$24.99* • SKU: 18312676
- “KidYogi” • \$24.98* • SKU: 18364787
- “Running Man” • \$17.99* • SKU: 9730879
- “Serious Moonlight” • \$29.98* • SKU: 18314028
- “SGU 1.0” • \$49.99* • SKU: 9730227
- “TeenYogi” • \$24.98* • SKU: 18364805
- “The Phantom” • \$17.99* • SKU: 9730915
- “The Stepfather” • \$29.99* • SKU: 9711107
- “The Time Traveler’s Wife” • \$34.99* • SKU: 9730184

*Prices listed in this issue are for general reference and may vary from retailer pricing.



The Time Traveler's Wife

Rating: PG-13 • Format: Blu-ray Disc



RELEASE DATE:
2/9/2010

MSRP: \$34.99*
SKU: 9730184



Nurse Jackie: Season 1

Format: Blu-ray Disc



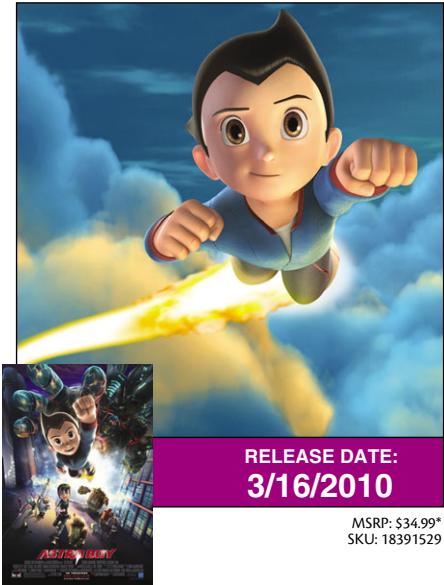
RELEASE DATE:
2/23/2010

MSRP: \$34.99*
SKU: 9730951



Astro Boy

Rating: PG • Format: Blu-ray Disc



RELEASE DATE:
3/16/2010

MSRP: \$34.99*
SKU: 18391529

■ February 16 to 22

- “Black Dynamite” • \$34.95* • SKU: 18317899
- “Cabin Fever” • \$17.99* • SKU: 9731059
- “Claymore: Complete Series Box 4” • \$69.98* • SKU: 18316609
- “Coco Before Chanel” • \$34.95* • SKU: 18347089
- “Heroic Age: Complete Series” • \$59.98* • SKU: 9673622
- “Hunger” • \$34.99* • SKU: 9709897
- “Lola Montès” • \$34.99* • SKU: 9709851
- “Ran” • \$29.99* • SKU: 9730979
- “Revanche” • \$34.99* • SKU: 9709906
- “The Lady Killers” • \$29.99* • SKU: 9730988
- “Women In Trouble” • \$29.98* • SKU: 18314783

■ February 23 to March 1

- “Clash Of The Titans” • \$34.99* • SKU: 18329921
- “Justice League: Crisis On Two Earths” • \$24.99* • SKU: 18314783
- “Motherhood” • \$24.98* • SKU: 18309863
- “Nurse Jackie: Season 1” • \$34.99* • SKU: 9730951
- “Sorority Row” • \$34.99* • SKU: 18372467
- “The Crazies” • \$29.95* • SKU: 18312985
- “Universe: Complete Season 4” • \$34.99* • SKU: 9709742
- “Wrong Side Of Town” • \$24.99* • SKU: 9730906

■ March 2 & Later

- “2012” • \$39.95* • SKU: 18383457
- “Alice” • \$24.99* • SKU: 9731031
- “Astro Boy” • \$34.99* • SKU: 18391529
- “Capitalism: A Love Story” • \$29.99* • SKU: 9738853
- “Crouching Tiger, Hidden Dragon” • \$24.95* • SKU: 8165558
- “D Gray-Man: Season 1 Part 2” • \$59.98* • SKU: 18353062
- “Glacier National Park” • \$24.98* • SKU: 18364456
- “Hachiko: A Dog’s Story” • \$34.95* • SKU: 18371477
- “NFL: Super Bowl XLIV Champions” • \$34.99* • SKU: 9738826
- “Pirate Radio” • \$36.98* • SKU: 18384438
- “Planet 51” • \$39.95* • SKU: 18392449
- “Ponyo” • \$29.99* • SKU: 9738826
- “Possession” • \$29.99* • SKU: 9270246
- “South Park: Complete 13th Season” • \$59.99* • SKU: 18354186
- “The Boondock Saints II: All Saints Day” • \$34.95* • SKU: 9740939
- “The Neverending Story” • \$28.99* • SKU: 18329949
- “The Private Lives Of Pippa Lee” • \$29.98* • SKU: 18351019
- “UFC: Best Of UFC 2009” • \$29.97* • SKU: 9738771

NOTEWORTHY

Accessories & Services

**RACING WHEELS**

- A gaming steering wheel puts you in the driver's seat of a virtual race
- A comfortable, accurate wheel should give you more control with turns, braking, and acceleration
- Be sure to purchase a racing wheel that's compatible with your specific gaming console

**USB DEVICES**

- A USB media hub will let you connect other USB devices (including MP3 players and portable gaming devices) to your game console
- Use a USB rechargeable battery pack to charge the Li-Ion battery for guitar controllers

**GAMING KEYBOARD**

- Adding a keyboard can help game efficiency—type in text codes and chat with other players quickly
- Look for a model with a touchpad so you can easily scroll around the game display
- Models that offer hotkeys will enable you to quickly perform gaming tasks, such as gameplay actions

**MUSIC CONTROLLER ACCESSORIES**

- Add a heavy-duty bass pedal to your gaming drum set to replace your standard pedal
- A tripod microphone stand will make your song-based games more true-to-life
- Extra cymbals for your rock drum kit will give you more freedom to express musical ability

**EXTERNAL MEMORY**

- External hard drives, USB drives, or memory cards back up your in-progress games
- When additional memory is connected to live (online) games, you can save gaming content and downloads
- The more memory you have, the more games and downloads you'll be able to store

**WIRELESS CONTROLLER**

- Bluetooth technology lets you play while also having the freedom to move around
- Some controllers use traditional AAA batteries to sustain your playing time
- Find the best design for your grip: ergonomic or traditional

**GAMING SERVICES**

Your local CE retailer provides some helpful services, both in-home and in-store, to enhance your gaming console. Specifically, the professionals can set up online connections, install system updates, and transfer data to a gaming storage device.

- Online account configuration
- Console system updates
- Stream media from a PC to a gaming console
- Connect a console to a home-theater center

POWERLINE NETWORKING



Consumer electronics devices are connecting to the Web to bring all kinds of new features to traditional devices, such as audio and video streams to your home theater, Internet-based weather reports to radios and stereos, photo-sharing to digital photo frames, and more. But things get tricky when it comes to networking these devices, which are often distributed throughout the household.

Wireless is great, but only the latest wireless networking gear can handle the high bandwidth of HD content. Using wired Ethernet is a more reliable and robust means, but installing an Ethernet jack in every room could be pricey and labor-intensive. But with a powerline network, you can keep your connected devices online without knocking holes in your walls or upgrading your entire home network. Read on to find out how powerline networking combines the bandwidth of wired networks with the ease of use required for a Wi-Fi network.

onsumer electronics devices are connecting to the Web to bring all kinds of new features to traditional devices, such as audio and video

Online Outlets

A powerline network relies on another kind of network that all homes already include by default, the power network. The electrical system in your home consists of one or more fuse boxes and copper wiring that runs between each power outlet to give your electronics the current they require to operate. A powerline network simply taps into this existing network and uses the copper wiring to pass data bits between powerline network adapters. Powerline adapters utilize a technology called OFDM (orthogonal frequency-division multiplexing), which enables the copper wiring to carry multiple data streams even while powering appliances and devices throughout your home. The latest devices also work independent of line voltage and current frequency to provide a consistent and reliable networking experience.

This Internet access solution makes a lot of sense because there's always an outlet near the computer and another outlet near the Internet-enabled devices you'll likely be using. And if you can plug in a power adapter and an Ethernet cable,

you can install and configure a powerline network yourself in minutes.

Powerline Particulars

To build your own powerline network, all you need is a pair of powerline network adapters, which are typically sold in pairs. Do note that you'll need an additional powerline adapter for each additional device you want to connect to the network beyond the first device. Installation generally involves plugging a powerline adapter into a wall outlet near the PC and running a short length of Ethernet cable between the powerline adapter and your router. To complete the network setup, simply plug a second powerline network adapter (which will be the same brand and model as the powerline adapter plugged in near the PC) into an outlet near the Internet-enabled device, such as a gaming console in the home theater, and run a short length of Ethernet cable between the device and the adapter.

Powerline's Pros

Powerline networking's biggest benefit for users is that it requires no new wires

to work. And it's no bandwidth slouch either; powerline networking equipment that adheres to the HomePlug AV specification can handle bandwidth-hungry HD video content streaming between 200Mbps and up to 1,000Mbps. Because power lines can be shared between businesses and homes, many powerline adapters have built-in encryption that lets you secure data traffic with the touch of a button.

Powerline adapters are generally compatible with any device that communicates over a standard Ethernet port, such as desktop and notebook PCs, game consoles, DVRs, network storage devices, set-top boxes, Web-enabled TVs, and more. Some powerline adapters also provide power, freeing up an outlet for another device.

Additional features you'll find on powerline networking equipment include an auto detection capability, which makes setting up a powerline network plug-and-play simple, and an auto sensor capability, which automatically configures the network speed based on current conditions.

Networking Simplified

Powerline networks offer many of the same benefits you'll experience with other networking technologies with few of the drawbacks. In fact, you might say powerline is the network lifeline your home theater has been longing for all along. **FG**



Netgear's Powerline AV Ethernet Adapter Kit

You already know how easy it is to build a powerline network, but with Netgear's Powerline AV Ethernet Adapter Kit (Model XAVB101: \$129.99; www.netgear.com), you get loads of features that make getting your Internet-capable devices online easy, no matter where in your home they reside.

The Netgear Powerline AV Ethernet Adapter Kit, as its name suggests, relies on the HomePlug AV specification, meaning it is designed to handle the bandwidth and quality of service demands of home-theater applications. These units support a data rate of up to 200Mbps, which is enough to transmit visually stunning HD video to your home-theater equipment without a hiccup. The kit includes a pair of Netgear powerline Ethernet adapters, a 5-foot length of Ethernet cable, and a setup CD. Each unit features three tri-color LEDs that indicate data rate and connectivity, so you know at a glance if they're online. With the touch of a button, you can enable 128-bit AES data encryption to make sure everything that travels over the network is safe from prying eyes. These powerline adapters can supply connected devices with both network connectivity and power, as is the case with some wireless routers. This kit is generally capable of creating a powerline network in up to 5,000 square-foot homes. ●

Plan A Romantic Valentine's Day



TomTom ONE 130 Portable GPS

Get directions to a romantic locale or use the point-of-interest information to find unexpected detours.

\$129.99



Insignia Blu-ray Disc Player

Watch your favorite romantic comedies in HD and fall in love again.

\$149.99



Microsoft LifeCam Cinema Webcam

Make a date for a Valentine's heart-to-heart, even if your sweetie is far away.

\$79.99



Nostalgia Electrics Mini Chocolate Fondue Fountain

Add some sweetness to your rockin' singles mixer.

\$34.99



HoMedics Foot Pleaser Foot Massager

Relax the night away with a foot massage.

\$39.99



Currie Technologies Izip Via Mezza Electric Bike

Take a ride through the country and end with a picnic under the stars.

\$899.99

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miBooks come on cards you pop into the player. Use them to cook, repair, decorate, garden, travel, build, give birth, raise kids,

make crafts, train pets, play piano, master algebra, and more.

By combining text, video, and sound, miBooks fuse the strengths of books and TV. This makes even everyday activities easier. When cooking, for example, home chefs no longer need to plow through confusing text. Chefs show you exactly what to do, and miBooks stop automatically after each step so you can cook at your own pace. miBooks even sort recipes based on main ingredient, cooking method, and available time.

miBook is so different that it brings into question the definition of "book" . . . Please, Santa, I'll expect it in your bag next year.

—San Francisco Examiner

Now that the Kindle is giving Gutenberg's crazy invention a run for its money, maybe devices like miBook will give Amazon's Jeffrey P. Bezos a run for his.

—The New York Times

